19. A Brown

MGS-S 341 (N)
40,000

NOT TO BE PUBLISHED

Is kitáb men jo báten likhi gai hain wuh baráh-i-rást ya kisi zarie se akhbár wálon ko ya kisi aise shakhs ko hargiz na batái jáen jo sarkári mulázim ki haisiyat se in ke jánne ka haq na rakhta ho.

G. S., 8263/M. T. 2(P)

ROMAN URDU

Small Arms Training,

Volume I, Pamphlet No. 7, (INDIA)

·303-Inch Machine Gun

PART I.—MECHANICAL SUBJECTS

1940

(Translation of Small Arms Training Vol. I, Pamphlet No. 7, (India) ·303-inch Machine Gun Part I—Mechanical Subjects, 1940).

Issued by the General Staff in India.

1st Edition] [*40,000 Copies.*

TARMIMON KI FIHRIST

Tarmim ki tárikh aur *Number*	Tarmim ka *India Army Order* aur us ki tárikh	Bare *section* jin ki tarmim ki gai hai	Tarmim karne ki tárikh	Tarmim karne wále ke dastkhat

MAZMUNON KI FIHRIST.

Section. Safha.

Section. Safha.

ROMAN URDU

SMALL ARMS TRAINING

Vol. I, Pamphlet No. 7, (India)

·303-INCH MACHINE GUN.

PART I—MECHANICAL SUBJECTS,

1940.

HADISE SE BACHNE KI IHTIYATEN.

Har aise mauqe par jabkih sikhlái ke kámon ke lie *gun* aur *dummy round* istemál kie jáen, *instructor* hádise se bachne ki niche batái hui hidáyaton par zarur amal kare :—

(*a*) Tamám *lock*on ka muláhaza karke apna itminán kar le kih *striker, firing pin hole* men se nikalta to nahin hai.

(*b*) Tamám *ammunition* ka muláhaza karke dekhe kih us men koi jangi *round* to nahin hai.

Note.—Jab kabhi *gun* wagaira ke purzon ki chál ki sikhlái di jáe to *D. P.* wála sámán (agar mil sake) istemál kia jáe.

SECTION 1.—GUN AUR *TRIPOD* KA AM BAYAN

PAHLA SABAQ.—ZARURI SAMAN AUR AM BAYAN.

***Instructor* ke lie note.**

(Taswir I) (Roman Urdu *Vickers Handbook* ki Taswir 10).

Zaruri sámán.—*Gun, tripod, belt box, belt* aur *dummy round, spare parts case, condenser* aur *tube,*

gun chest, *spare barrel*, *cleaning rod* (Naqsha—agar mil sake).

Yih umid na karni cháhie kih jawán tamám hisson aur purzon ke nám yád rakhe.

Gun aur *tripod* ke sirf bare bare hisson aur purzon ka bayán karo aur bayán ke sáth sáth har ek hisse ya purze ka nám bhi batáo.

Gun ko kholkar wuh hisse aur purze dikháo jo *recoil* hone men kám dete hain ya jin par *recoil* hote waqt asar parta hai.

Jawánon ko zor de dekar samjháo kih tamám hisse aur purze bare mazbut banáe gae hain.

Gun ko páni se thanda rakhne ka bandobast samjháte waqt, agar mil sake to naqshe se kám lo.

1. **Gun ka nám.**— ·303″ *Vickers Machine Gun.*

2. **Gun ka wazan.**—Koi 40 *pound* yane 20 ser. (Jabkih *barrel casing* men páni bhara ho).

3. ***Fire* ki raftár.**—Ek *minute* men koi 500 *round*.

4. ***Gun* ke purzon ko kaunsi táqaten chaláti hain.**—

Gun ke purzon ko do táqaten chaláti hain:—

(*a*) *Round* ke andar ki bárud ke jal uthne se jo zor paida hota hai wuh *recoil* hone wále hisson ko pichhe ko chala deta hai, aur—

(*b*) *Fuzee spring* ka dabáo jo *recoil* hone wále hisson ko bhi áge ko chala deta hai: is tarah *gun* ke hisse in do táqaton ke zor se áp hi áp harakat karte hain.

5. ***Recoil* hone se kin kin hisson aur purzon par asar parta hai.**

Recoil hone se in in hisson aur purzon par asar parta hai:—

Muzzle cup.

Barrel.

Right side plate aur *left side plate.*

Crank aur *crank handle.*

Fuzee.

Fuzee spring.

Connecting rod.

Lock.

Feed block.

(*Gun* ke hisson aur purzon ko dobára joro).

6. ***Barrel casing.***—*Barrel casing* men, báhar ki taraf yih chizen lagi hoti hain:—

Muzzle attachment, *foresight*, do pechdár *plug* (páni bharne aur kháli karne ke lie) *condenser* ka *adapter tube* aur *cork plug*.

Barrel casing ke andar *barrel* aur *steam tube* lage hote hain. *Barrel* ke gird páni rahta hai, tákih *barrel* ziáda garm na hone páe. *Gun* ke *fire* hone se *barrel* garm hone lagta hai aur *barrel* ke garm hone se *barrel casing* ka páni garm hone lagta hai. Koi 750 *round* *fire* hone par páni khaulne lagta hai aur us men se bháp nikalne lagti hai.

Andar ki taraf aur *barrel casing* ki uparli satah men jura hua ek *steam tube* (bháp nikalne ki nalki) hota hai, jis men ek khisakne wála *valve* laga hota hai. *Steam tube* men tin surákh bane hote hain, ek pichhe ki taraf aur do áge ki taraf.

Jab *gun*, *elevation* lagákar *fire* ki játi hai to *valve* khisak-kar pichhe ki taraf ke surákh ko band karta hai jis se bháp áge ki taraf ke surákh men dákhil hokar *steam tube* men se hoti hui báhar nikal játi hai.

Jab *gun* ko *depression* dekar *fire* kia játa hai to *valve* khisak-kar áge ki taraf ke surákh ko band karta hai, jis se bháp pichhe ki taraf ke surákh men dákhil hokar usi tarah *steam tube* men se hoti hui báhar nikal játi hai.

Adapter men *condenser tube* jura hota hai. Bháp isi men se hokar *steam escape tube* se *condenser* men chali játi hai. Bháp ko thanda karke use phir páni

banáne ke lie zaruri hai kih itna káfi páni ho kih us men *condenser tube* ka sira duba rahe.

7. ***Breech casing.***—*Breech casing* in hisson se milkar bana hai. Do *out-side plate, bottom plate front cover* aur *rear cover*, aur *rear cross-piece. Breech casing* se báin taraf yih hisse aur purze lage hote hain. *Fuzee spring, fuzee spring box,* aur *left slide. Breech casing* se dahni taraf *check lever* aur *right slide* laga hota hai. *Rear cover* par *tangent sight; bottom plate* par *sliding shutter;* aur *rear cross-piece* par *traversing handle, safety catch* aur *thumb piece* lage hote hain. *Rear cross-piece* ek "*T*" *fixing pin* ke zarie apni jagah par qáim rahta hai.

8. ***Feed.***—*Gun* men ek *belt* ke zarie (jis men 250 *round* hote hain) *ammunition* pahunchta hai. *Belt, feed-block* men dahne se báen ko chalta hai.

9. ***Tripod***—*Tripod* jis ke tin páe hote hain in hisson se milkar bana hota hai:—

Jamming handle, crosshead, traversing clamp, direction dial aur *elevating gear. Crosshead* men do *pin* lage hote hain, *cross-head joint pin* aur *elevating joint pin. Gun* inhi ke zarie *tripod* men jori játi hai.

Elevating gear ke zarie *elevation* (ya *depression*) aur *traversing clamp* ke zarie *direction* hásil kia játa hai.

Tripod ka wazan koi 25 ser hota hai.

10. ***Gun chest.***—Jab *gun* ko ek jagah se dusri jagah le jána hota hai to us ko ek sanduq men band karke le játe hain jo *gun* ke sáth dia játa hai aur jis ka nám *gun chest* rakha gaya hai. *Gun chest* men *gun* ke aláwa *clearing rod* aur fáltu *barrel* bhi rakha játa hai.

11. ***Gun* ki khubián.**—(*a*) Yih der tak lagátár *fire* kar sakti hai, aur yih is lie kih:—

1. *Barrel* ko páni se thanda rakhne ka jo bandobast kia gaya hai us ki wajah se *barrel* ziáda garm nahin ho játa.
2. *Belt feed* ki wajah se *gun* men *ammunition* barábar pahunchta rahta hai, aur

3. Kám karne wále hisse aur purze mazbut hote hain, jis se *gun* bahut kam tutti ya bigarti hai.

(*b*) *Gun* ka nishána bara durust hota hai, kionkih ek to us ka *mounting* bhári hone ki wajah se kam hilta hai, dusre *mounting* men *gun* khub kaskar lagi rahti hai.

Gun se *indirect fire* aur *overhead fire* kia ja sakta hai.

Agar ujále men pahle se munásib taiyárián ki gai hon to *gun* se andhere men bhi *fire* kia ja sakta hai.

12. **Niche batáe hue kámon ka namuna dikháo.**

(*a*) *Load* karna. (*b*) *Fire* karna. (*c*) *Unload* karna.

SECTION 2.—CHÁL

Pahla Sabaq.—Dusre se Chhate Sabaq tak ke lie Zaruri Saman.

Instructor* ke lie *note

Zaruri sámán.—*Gun, tripod, belt box, belt* aur *dummy round*, khokha, fáltu, *lock* aur fáltu *feed-block, skeleton lock*, naqshe.

Har ek sabaq ke tin hisse hain, yane "taiyári" "kám ka namuna" aur "bayán." In men se pahla hissa sirf *instructor* ke lie hai. Mamuli sipáhi kám ki naql na karen. Jo chál samjháni ho us ka namuna dikháo aur sáth hi sáth naqshon se kám lete hue zaruri báten samjháte jáo.

Dusra Sabaq.—Pichhe ki taraf ki Chal.

Instructor* ke lie *note

Taiyári.

1. *Outer casing* ka *muzzle attachment* kholkar alag kar lo.

2. *Gib* ke uparle aur nichle *projection* ke darmiyán ek khokha rakho.

3. *Half load* karo.

4. *Thumb-piece* dabáo.

5. *Fuzee box* aur *fuzee spring* kholkar alag kar lo.

6. *Rear cover* utháo.

7. Fáltu *feed-block* ko *bottom pawl*on ke áge ek *dummy round* rakhkar taiyár karo.

8. Sikhlái dene ki ám tartib yih honi cháhie:—

(*a*) *Gun* ko *mount* karna.

(*b*) Áhista áhista namuna dikháte hue aur jawánon se sawál karte hue tamám báten achchhi tarah samjhána.

(*c*) Namuna dikháte hue bayán karna.

(*d*) Jawánon se sawál karna.

(*e*) *Gun* ko sirf *instructor*on ke lie *mount* karna.

Kám ka namuna.

1. Sámne ki taraf se *recoil* hone wále hisson ko dhakelkar pichhe ko le jáo aur yih kám karte hue jawánon se kaho kih:—

(*a*) *Recoil* hone wále purzon ko pichhe ki taraf hatte dekhen.

(*b*) *Feed-block slide* ko dahni taraf ko chalte dekhen.

2. Fáltu *feed-block* se kám lete hue dikháo kih *feed block* kis tarah kám karta hai.

Bayán.

3. *Gun* ke *fire* hone par *recoil* hone wále hisse dhakka khákar pichhe ko chalte hain. *Recoil* karne wále hisson ko pichhe hatne men wuh *gas* bhi madad deti hai jo *round* ke *fire* hote hi bare zor se *front cone* par dhakka márti hai aur palatkar *muzzle cup* se takráti hai. *Recoil* hone wále hisson ke pichhe ko harakat karne se

feed-block slide dahni taraf ko chalta hai, jis se *top pawl* ek *round* ke pichhe ja lagte hain jo pahle se *bottom pawl*on ke áge hai.

TISRA SABAQ.—*Crank Handle* KA GHUMNA.

***Instructor* ke lie *note*.**

Taiyári.

1. *Outer casing* ka *muzzle attachment* kholkar alag kar lo.

2. *Gib* ke uparle aur nichle *projection* ke darmiyán ek khokha lagáo.

3. *Half load* karo.

4. *Thumb-piece* dabáo.

5. *Fuzee box* aur *fuzee spring* kholkar alag kar lo.

6. *Rear cover* utháo.

7. Fáltu *feed block* ko *bottom pawl*on ke áge ek *dummy round* rakhkar aur *slide* ko dahni taraf ko chalákar taiyár karo.

Kám ka namuna.

1. *Recoil* hone wále hisson ko sámne ki taraf se pichhe ko dhakelkar le jáo yahán tak kih *crank handle* sidha khare rukh a jáe. *Crank handle* ka *knob* dabáo tákih *crank* ka chakkar pura ho jáe. Phir jawánon se kaho kih yih kám hote dekhen:—

(*a*) *Crank handle* ke pichhle sire ka ghumna.

(*b*) *Fuzee spring* ka khichkar barhna.

(*c*) *Crank handle* ka aur ziáda ghumna, jis se *recoil* karne wále hisse áge ko chalte hain aur *feed-block slide* báin taraf ko chalta hai.

2. Fáltu *feed-block* se kám lete hue dikháo kih us ke purze kis tarah kám karte hain.

Bayán.

1. Jab *recoil* hone wále hisse pichhe ko chalte hain to *crank handle* ka pichhla sira *roller* se takráta hai, jis se *crank* ghumne lagta hai. *Crank* ke ghumne se *lock* khichkar pichhe ko chalta hai.

Crank ke ghumne se *fuzee chain, fuzee* par lipat játa hai jis se *fuzee spring* khichkar barh játa hai.

2. *Roller* par *crank handle* ke aur ziáda ghumne se aur kuchh *fuzee spring* ke khicháo ke zor se *barrel* aur *side plate* áge ko chalta hai.

In ke is tarah áge chalne se *feed block slide* par dabáo parta hai jis se wuh báin taraf ko chalta hai aur *top pawl* ek *round* ko aisi jagah rakh deta hai kih us ko *extractor* pakar le. Sáth hi sáth bád ka *round* khichkar *bottom pawl*on ke áge a játa hai.

CHAUTHA SABAQ.—*Lock* KA PICHHE KO CHALNA.

Instructor ke lie *note.*

Taiyári.

1. *Gib* ke uparle aur nichle *projection* ke darmiyán ek khokha rakho.
2. *Half load* karo.
3. *Thumb-piece* dabáo.
4. *Fuzee box* aur *fuzee spring* kholkar alag kar lo.
5. *Rear cover* utháo.

Kám ka namuna.

1. *Crank handle* ko khenchkar *roller* per le áo. Jawánon se kaho kih niche batáe hue kám hote dekhen:—

(*a*) Jangi *round* aur khokhe ka khichkar nikal ána.

(*b*) Jangi *round* ka khichkar *chamber* ki sidh men a jána.

(*c*) *Tumbler* ka ghumna.

2. (*Skeleton lock* se kám lete hue).

Jawán niche batáe hue kám hote dekhen:—

(*a*) *Tumbler* ka ghumna.

(*b*) *Firing pin* ka pichhe ko khich ána.

(*c*) *Lock spring* ka dabkar simat jána.

(*d*) *Sear* ka kám karna.

Bayán.

Jab *lock* pichhe ko chalne lagta hai to wuh *feed block* men se ek jangi *round* aur *chamber* men se ek khokha nikálkar apne sáth pichhe le játa hai. Junhi kih *extractor* ke sing, *cam*on ke pichhle sire par pahunchte hain, *extractor* un *rampon* se dabkar niche ko utar áta hai jo *rear cover* par bane hote hain. Is tarah *extractor* jangi *round* ko *chamber* ki sidh men láta hai; aur khokha ám taur par alag hokar gir játa hai. Is harakat ke daurán men *side lever head* uthkar *tumbler* ke pichhle sire par dabáo dálta hai. *Tumbler* ke is tarah ghumne se *firing pin* pichhe ko khichkar *lock spring* ko dabáta hai. *Firing pin* ko *sear* roke rahta hai.

PANCHWAN SABAQ.—*Lock* KA AGE KO CHALNA.

Instructor ke lie *note.*

Taiyári.

1. *Half load* karo.
2. *Fuzee box* ko kholkar alag kar lo.
3. *Crank handle* ko khenchkar *roller* par le áo aur *belt* ko khencho.
4. *Rear cover* utháo.

Kám ka namuna.

Fuzee spring ko khenchkar *crank handle* ko *check lever* par le áo. Jawán yih kám hote dekhen:—

Fuzee chain ka khulna.

Lock ka áge ko chalna.

Bayán.—

1. *Fuzee spring* ke khicháo se *crank* ghumta hai aur *lock* ko áge ko dhakel deta hai. *Extractor* jangi *round* ko *chamber* men rakh deta hai aur *side leveron* aur *extractor leveron* ki harakat se uthkar us *round* ko pakarta hai jo ab *feed* ke munh men a gaya hai. Ab *chamber* men lage hue *round* ka penda *firing pin hole* ki sidh men a gaya hai. Agar khokha alag hokar gir na gaya to wuh *extractor* ke uthne par uchhalkar alag ho jáega.

CHHATA SABAQ.—*Fire* KARNE MEN PURZON KI CHAL.

Instructor ke lie *note*.

Taiyári.

1. *Half load* karo.
2. *Rear cover* utháo.
3. *Crank handle* ko khenchkar *roller* par le áo aur *belt* ko khencho.

Kám ka namuna.

1. (*a*) *Lock* ko áge ko chalne do aur sáth hi yih dikháo kih *sear* ko *side lever head* kis tarah dabáta hai.

(*b*) *Thumb-piece* ko dabákar dikháo kih *trigger bar*, *trigger* ke pichhle sire ko kis tarah khenchkar pichhe ko le játa hai.

(*c*) *Thumb-piece* par se dabáo hatte hue dikháo aur yih dikháo kih is se *trigger bar* kya kám karta hai.

2. *Skeleton lock* se kám lete hue—upar (*a*), (*b*) aur (*c*) men batáe hue kám duhráo.

Bayán.

1. Har dafa jab *lock* áge ko chalta hai to *side lever head*, *sear* ko daba deta hai. Is se *firing pin* chhutkar áge ko chalta hai yahán tak kih *trigger* ka

nose tumbler ke *bent* men lag játa hai, jis se *firing pin* ruk játa hai. Agar *safety catch* uthákar *thumb-piece* ko dabáya jáe to *trigger bar* khichkar pichhe ko hatta hai, jis se *trigger* ka *nose* bhi *tumbler* ke *bent* se alag ho játa hai. Ab *firing pin*, *lock spring* ke zor se áge ko chal parta hai.

2. Jab tak *thumb-piece* par dabáo qáim rakha játa hai, *fire* lagátár hota rahta hai, kionkih *trigger* ka *nose tumbler* ke *bent* se alag rahta hai aur is wajah se *trigger firing pin* ko áge chalne se nahin rokta. Dabáo hatne par *trigger* ka *nose* phir *tumbler* ke *bent* men lag játa hai jis se *firing pin* áge chalne nahin páta.

SECTION 3.—*GUN* AUR *TRIPOD* KO ACHCHHI HÁLAT MEN RAKHNE KE MUTAALLIQ ÁM HIDÁYATEN.

1. *Gun* ko sáf suthra aur achchhi hálat men rakhna niháyat zaruri hai, tákih us se jo kám lena ho lia ja sake.

Machine gunon aur un ke sáth wále sámán ka *charge* lete waqt, muláhaza karna cháhie. Bád men bhi aksar un ka muláhaza karte rahna cháhie.

Instructor ke lie *note*.

Zaruri sámán.—*Gun*, *tripod*, *belt box*, *dummy round*, *spare parts box* aur *case*, *cleaning rod*, falálain, purána suti kapra.

Yih sámán Hindustáni faujon ko dia játa hai.

SATWAN SABAQ.—SAFAI.

(*a*) Roz ki safái.

Gun ko har roz báhar se sáf kia jáe. Kám karne wále jin hisson aur purzon tak háth pahunch sake unhen ek aise chithre se ponchh lia jáe jo tel men tar karke nichor dia gaya ho. *Bore* ki satah par tel lagákar chhor do. Roz ki safái ho chukne par *gun* ka muláhaza kia jáega. Is men yih dekha jáega kih *gun*

sáf suthri hai kih nahin aur us ka koi hissa tuta phuta to nahin hai. *Bore* ka muláhaza karne ke lie *mirror reflector* yane us chhote áine se kám lia jáe jo isi matlab ke lie hota hai.

***Barrel* sáf karne ka tariqa.**—*Lock* nikálo aur *muzzle attachment* aur *muzzle cup* ko kholkar alag kar lo. Ab *cleaning rod* ke náke men sukhe falálain ki ek chindi (4×2 *inch* ki) dálkar *barrel* men *muzzle* ki taraf se guzár do. Is bát ka zarur itminán kar lo kih *muzzle* par *bush* charha hua ho. Phir *cleaning rod* ko bár bár áge pichhe chaláo. Is ke bád falálain ki sáf chindián laga lagákar yihi kárrawái us waqt tak karte jáo jab tak *barrel* sáf na ho jáe.

Mirror reflector ke zarie *bore* ka muláhaza karo.

***Barrel* men tel lagána.**—Upar batái kárrawái duhráo magar ab ke falálain ki zara chhoti chindi istemál karo, jo tel men khub tar ho.

***Double pull-through* se kám lena.**—*Double pull-through* istemál karne se pahle do báten dekhni zaruri hain, ek yih kih us ka *weight* terha merha na ho dusre us ki rassi achchhi hálat men ho. Us ki jáli par khub achchhi tarah tel lagáo aur dekhkar apna itminán kar lo kih *barrel* par *muzzle protector* charha hua hai.

Yih zaruri hai kih *barrel* ko sáf karne ke lie *gun* men se kholkar alag kia jáe. Agar *barrel* ko *pull-through* ke zarie sáf kia jáe to use kisi munásib shikanje men kas dena cháhie ya kisi jawán se kah dena cháhie kih use mazbuti se pakre rahe. Iske bád *pull-through* ko *barrel* ke andar áge pichhe chaláya jáe.

Iska bara khayál rakho kih *pull-through* ki rassi barábar tani rahe aur *barrel* ka *breech* wála sira rassi se ragar khákar ghisne na páe. (Dekho *I.A.O.* 924 bábat 1936.)

Barrel khaulta páni istemál karke bhi achchhi tarah sáf kia ja sakta hai. Is ke lie *barrel* ko *gun* men se kholkar alag kar lo phir wuhi kárrawái karo jo *rifle* ka *barrel* sáf karne men ki játi hai. (Dekho *Pamphlet No.* 3, Safha 16).

(*b*) **Haftawár safái.**

Gun ke tamám hisse aur purze pure taur par kholkar sáf kie jáen aur muláhaze ke lie sukhákar rakhe jáen. Agar *bore* men zang lag gaya ho to us men se pahle falálain guzárkar aur phir us men se khaulta hua páni dálkar *double pull-through* se sáf karna cháhie.

Muláhaza ho lene par *gun* ko *gun chest* men rakhne se pahle tel dena cháhie.

Spare parts aur *gun* ke sáth ke sámán ka muláhaza karke un ki ginti ki jáe.

Athwan Sabaq.—Mulahaza, *Test* aur Durustian.

Zaruri sámán.—*Gun*, *tripod*, tamám *spare parts*, fáltu *barrel*, *Service Lock*, *Skeleton Lock*, Naqshe, *Belt box*, *Belt* aur *dummy roundon* samet.

1. ***Muzzle attachment.***—Us men *fouling* na laga ho, dánte na par gae hon, *disc* sáf suthra ho, *split pin* aur *chain* donon achchhi hálat men hon.

2. ***Muzzle cup.***—Bilkul sáf suthra ho, us ki churián na to tuti hon na bahut ziáda ghisi hon.

3. ***Steam tube.***—*Keeper screw* durust jagah par laga ho, aur *sliding valve* kám karta ho (yih dekhne ke lie, *gun* ko *tripod* par se utárkar us ke sir ko kai bár, upar niche karo. Agar *valve* ke áge pichhe khisakne ki áwáz sunái de to samajh lo kih *valve* kám karta hai).

4. ***Fore-sight.***—*Blade* achchhi hálat men ho aur apni jagah par mazbuti se jama ho.

5. ***Front cover catch.***—Durusti se kám de raha ho.

6. ***Fuzee spring* aur *fuzee.***—*Spring* ke *claw*, *fuzee* aur *chain* achchhi hálat men hon.

Vice pin terha merha na ho.

***Fuzee spring* ko wazan karke durust karne ki bábat hidáyaten.**

Gun men se *lock* nikálkar *spring balance* ki rassi *crank handle* ke *knob* par charháo. Ab kalái ko *breech*

casing par tikákar *spring balance* ko sidha upar ki taraf khencho. Jab *crank handle* hilne lage us waqt jo hindasa parha jáe wuhi *fuzee spring* ka wazan (khicháo ka zor) hai. Yih wazan 7 aur 9 *pound* ke darmiyán hona cháhie. Agar *spring* ka wazan is se kam ya ziáda ho to *vice pin* ke zarie use thik karo. Ám taur par jab *pin* chhe dafa chat chat kare (yane jab tin chakkar die jáen) to *spring* ke wazan men ek *pound* ka farq par játa hai. *Pin* ko upar ki taraf ghumáne se wazan ghatta hai aur niche ki taraf ghumáne se barhta hai. *Fuzee spring* ka wazan hamesha ziáda se ziáda rakhna cháhie lekin is had tak kih *fire* ki ám raftár (ek *minute* men koi 500 *round*) qáim rahe.

7. **Tangent sight.**—*Aperture* achchhi hálat men ho. Upar aur niche ke pech mazbuti se kase hon. *Slide* ásáni se khiskáya ja sake lekin jab laga dia jáe to apni jagah se sarak na sake.

8. **Rear cover lock.**—Jab apni jagah par baitha hua ho to us ka *catch* áp se áp band hota ho. *Cover lock* ka *screwed axis pin* pure taur par kasa hua ho.

9. **Safety catch.**—*Spring* áp se áp kám karta ho.

10. **Firing lever**—(*a*) *Thumb-piece* us waqt tak andar ko dabáya na ja sake jab tak *safety catch* utháya na jáe.

(*b*) *Safety catch* ke utháe jáne aur *thumb-piece* ke dabáe jáne par *lock fire* hota ho.

11. **Trigger bar** aur us ka **spring.**—*Trigger bar* par dánte na par gae hon aur khurdarápan na ho. *Trigger bar* ko us ka *spring* tezi se áge ki taraf dhakelta ho.

12. **Recoil** hone wále purze.—*Fuzee spring* alag karke *recoil* hone wále purzon ko áge pichhe chaláo. Unhen ázádi se chalna cháhie.

Recoil hone wále hisson ko wazan karne ke lie hidáyaten.

Fuzee spring kholkar alag kar lo aur *crank handle* qarib qarib sidha khara karo. Phir *spring balance* ke phande ko *crank shaft* ke dahne taraf ke sire par

charhákar áhista áhista pichhe ko khencho. Junhi *recoil* hone wále hisse chalne lagen *spring balance* par jo wazan záhir ho use parh lo. Wazan 4 *pound* se ziáda nahin hona cháhie.

Agar wazan 4 *pound* se ziáda ho to samajh lo kih ziáda *packing* hai. Yih kharábi ek had tak is tarah dur ki ja sakti hai kih *canellure* aur *gland* men jo *packing* laga hua hai use tel dia jáe aur *recoil* hone wále hisson ko chatak se áge pichhe chala dia jáe. Ab phir se wazan karo aur agar zarurat ho to upar batái hui kárrawái duhráo. Agar is kárrawái se bhi wazan zarurat ke mutábiq kam na ho to achchhi tarah dekho kih kahin *gun* ke *breech casing* ya *side plate*on ko nuqsán to nahin pahuncha hai.

13. **Connecting rod.**—*Adjusting nut* kasa hua ho.

14. **Lock.**—*Lock* ko ázmákar dekhne ki bábat hidáyaten.

(1) **Side lever aur extractor lever.**—*Feed-block* ko nikálo aur *front cover* ko utháe rakho. Phir *crank handle* ko pichhe ki taraf khenchkar áhista áhista áge ko chalne do yahán tak kih *check lever* se ja lage. Agar durust ho to *extractor* ab sab se unchi jagah par hoga. Dekhkar apna itminán kar lo kih *side lever*on par jo *number* khuda hua hai wuhi *lock casing* par bhi hai.

(2) **Sear aur firing pin ke bent.**—*Feed-block* nikalo aur *crank handle* ko khenchkar *roller* par le áo. Phir *thumb-piece* ko dabáo aur us ko dabáe dabáe *crank handle* ko áhista áhista áge ko chalne do yáhan tak kih wuh *check lever* se ja lage. Is se pahle kih *sear*, *firing pin* ko chhore, *extractor* apni sab se unchi *position* par pahunch chuka ho warna samjho kih durusti se kám nahin karta.

(3) **Extractor.**—*Lock* nikálkar us ke *face* ko dekho, kahin us men dánte to nahin par

gae ya aur kisi tarah ki kharábi to nahin hai. Dekhkar apna itminán kar lo kih *gib round* ko pare rukh pakre hue hai.

(4) ***Trigger* ki nok aur *tumbler* ka *bent*.**—*Lock* ko *cock* karke *sear* ko chhor do. Ab *firing pin* pichhe ko ruka hona cháhie.

(5) ***Firing pin*.**—Dekho kih *firing pin* ki nok tuti hui to nahin hai. Purzon ko khole bagair *firing pin* ke tute hone ya na hone ka pata lagáya ja sakta hai. Yih is tarah kih *lock spring* aisi hálat men chhora jáe jabkih *extractor* utha hua ho. Agar tuta hua na ho to *firing pin* is kárrawái se *firing pin hole* se nikla rahega aur *tumbler* ke pichhle sire ko uthákar pichhe ko khencha ja sakega. Agar *firing pin*, *firing pin hole* se nikla na rahe ya nikla to rahe magar *tumbler* ke pichhle sire ko utháne se khichkar andar ko chala na jáe to samajh lo kih *firing pin* ka koi na koi hissa zarur tuta hua hai.

Dekho *I.A.O. No.* 679 bábat 1931, *para* 1, 2 aur 3.

***Lock spring* ko wazan karne ke mutaalliq hidáyaten.**—

Lock ko pure taur par *cock* kar lo. Phir *lock* ki nichli satah ko kisi chapti satah par rakho. Ab *spring balance* ke phande ko *side lever head* par dálkar apna báyán háth *lock* ki uparli satah par rakho. Is ke bád *spring balance* ke zarie *side lever head* ko upar ko khencho. Thik us waqt jab *tumbler* ghumne lage *balance* ko 12 se 14 *pound* tak wazan záhir karna cháhie.

NAWAN SABAQ.—MULAHAZA, *Test* AUR DURUSTIAN (jári).

Zaruri sámán.—Wuhi sámán jo Áthwen Sabaq ke lie batáya gaya hai.

1. ***Barrel*.**—*Barrel* ka muláhaza bari hoshyári se karke dekho kih us men zang to nahin laga; lakiren

ya garhe to nahin pare; *pull-through* se ghisa to nahin; kahin se phula hua to nahin, aur dháti *fouling* to nahin laga hua.

Is tariqe par kám karo:—

Gun men se *barrel* kholkar alag kar lo. Phir *barrel* ko áhista áhista ghumáte hue *bore* men nazar dálo. Yih kám pahle ánkh *breech* ke qarib lákar phir *breech* se do chár *inch* hatákar karo. *Lead* ko achchhi tarah dekho, kahin wuh gair-mamuli taur par zang kháya hua to nahin hai. Ab *barrel* ko palatkar usi tarah bari hoshyári ke sáth *muzzle* ki taraf se muláhaza karna cháhie. Baz dafa *gun* ka nishána sirf is wajah se kharáb hota hai kih us ke *bore* men dháti *fouling* laga hota hai.

Naya *packing* lagáne ki bábat hidáyaten.

(1) ***Barrel* ke *breech* wále sire par naya *packing* lagána.**

Agar *gun* ke *breech* wále sire par *barrel casing* men se páni tapakta ya rista ho to *barrel casing* men se páni nikál lo aur *recoil* hone wále hisson ko báhar khench lo. Phir *barrel* ke *cannelure* par *asbestos* ka dhága lapeto aur use lakri ke ek patle tukre ya pechkash ya cháqu ki nok se *cannelure* men dabáte jáo, yahán tak kih *cannelure* bhar jáe. phir *asbestos* ko dabákar *barrel* ki satah ke barábar kar do aur us men tel dekar purzon ko dobára jor do.

(2) ***Barrel* ke *muzzle* wále sire ka *packing* badalne ki bábat hidáyaten.**

Agar *gun* ke *muzzle* wále sire ki taraf se páni tapakta ho to *gun* ko *rear cross-piece* ke bal khara karo. Phir *muzzle attachment* utár do aur *gland* ke pech khol do. Ab *gland* men dobára *packing* lagáo aur agar zarurat ho to *asbestos* badal do; *asbestos* ko tel dekar *barrel* par dhila lapette jáo aur lapette waqt use *Number* 3 *punch*, lakri

ya aur kisi munásib kund auzár se *gland* men andar ko dabáte jáo, yahán tak kih *gland* bhar jáe. Phir *gland* ka pech háth se jitna kas sako, kas do. *Gun* ko pare rukh rakhkar *fuzee* aur *fuzee spring* ko nikálo, *lock* ko *hang* karo aur *recoil* hone wále hisson ko áge pichhe chalákar apna itmirán kar lo kih wuh ázádi se harakat kar sakte hain. Agar yih malum ho kih *barrel* par *packing* ka dabáo ziáda hai to *gland* utárkar *asbestos* ke ek do dhâge nikál lo. Sab se ákhir men *combination tool* se kám lekar *gland* ko *barrel casing* men khub achchhi tarah kas do.

Packing ko ázmákar dekhna.—*Barrel casing* men itna páni bhar do kih *barrel* us men dub jáe. Phir *recoil* hone wále hisson ko áge pichhe chalákar dekho. Páni zara bhi tapakna nahin cháhie. Ab *recoil* hone wále hisson ko ázmákar dekho kih wazan durust hai ya nahin.

2. ***Feed-block.*** *Slide* ázádi se kám karta ho; *pawl* aur *spring* achchhi hálat men hon. *Top lever* aur *bottom lever* jor par se kaskar lage hon.

3. ***Sliding shutter.***—*Catch* aur *spring* áp se áp kám karte hon. *Sliding shutter* ázádi se kám karta ho. Agar *sliding shutter* atak atak-kar chalta ho to dekhkar apna itminán kar lo kih:—

(*a*) Us men mail ya kirkiri to nahin lagi.

(*b*) Nichla *plate* pichka hua to nahin. Yih kharábi *connecting rod* ke us waqt giráe jáne se paida ho játi hai jabkih *gun* men *lock* na ho.

4. ***Axis* aur dusre *pin*.**—Dekh lo kih sab *pin* durusti se lage hon.

5. ***Tripod***.—*Tripod* ke bahut se hisse aise hote hain jo ghiste ghiste zara hilne lagte hain. Go koi ek hissa ziáda na hilta ho, lekin phir bhi kai ek hisson ke

ikatthe hilne se *gun* ke nishâne ki durusti men káfi farq par sakta hai.

Upar niche ko hilna.—Yih kharábi ám taur par *elevating gear* men hoti hai. Is ka iláj is tarah kia ja sakta hai kih *jamming bolt* dhila karke *tumbler nut* ko aur kas dia jáe aur *jamming bolt* dobára kaskar laga dia jáe.

Dahne báen ko hilna.—Ám taur par yih nuqs *cross head* ke munh ke phail jáne se par játa hai.

Yih bhi dekhna cháhie—

1. *Clutch plat*on men kirkiri ya ret nahin lagi hui hai.
2. *Jamming handle* terhe merhe to nahin hain.
3. Zanjiren thik thik lagi hui hain.
4. *Feather* aur *joint pin* men koi nuqs to nahin.
5. ***Leg joint*on ka muláhaza karo.**
6. ***Belt* aur *belt box*.**

Belt.—Yih mail se pák sáf hon; pital ki pattián achchhi hálat men hon; *belt* ki niwár kahin se phati ya ghisi na ho.

Belt box.—Yih mail se pák sáf hon aur inhen kisi tarah ka nuqsán na pahuncha ho.

Daswan Sabaq.—*Fire* Karne ke lie *Gun* aur *Tripod* ko Taiyar Karna.

Zaruri sámán.—Wuhi sámán jo Sátwen Sabaq ke lie batáya gaya hai.

1. *Gun* ke hisse aur purze khol do.
2. Tamám hisson aur purzon ka muláhaza karke unhen sáf karo.
3. *Barrel* ki báhar wáli satah par tel lagáo.

4. In hisson aur purzon par tel lagáo:—
   (a) *Recoil* hone wále hisse. *Extractor* ke *face* par lagáo magar *muzzle cup* par na lagáo.
   (b) *Ramp.*
   (c) *Trigger bar.*

5. *Gun* ke hisson aur purzon ko dobára jor do.

6. *Barrel* ki andar wáli satah, *muzzle cup* aur *muzzle attachment* ko khushk kar lo.

7. Apna itminán kar lo kih *muzzle cup* mazbuti se kaskar laga hua hai.

8. *Gun* ko *level* karo. Phir *breech* wále sire par *barrel casing* men jo pechdár *plug* laga hua hai use alag karke *cork plug* nikálo aur *barrel casing* men páni bhar do.

9. In hisson aur purzon ka wazan karke dekho:—
   (a) *Fuzee spring.*
   (b) *Recoil* hone wále hisse.
   (c) *Lock spring.*

10. Dekhkar apna itminán karo kih *traversing handle* men aur *spare parts case* men rakhe hue *can* men tel bhara hua hai.

11. *Spare parts case* aur *box* men jo purze rakhe rahte hain un ki partál karo.

12. Dekhkar apna itminán kar lo kih:—
   (a) *Condenser tube* ko koi nuqsán nahin pahuncha hai.
   (b) *Gun* men *condenser tube* thik taur par jura hua hai.

13. *Condenser* páni se do tihái bhara hua ho.

14. Fáltu *barrel* men *packing* thik taur par laga hua ho aur *fire* karne ke lie taiyár ho. *Cleaning rod; gun chest* men ya *carrier* par rakha hua ho.

15. *Tripod* ka muláhaza karo.

16. *Ammunition* sukha aur sáf ho.

17. *Belton* ka muláhaza karke apna itminán kar lo kih:—
   (a) Achchhi hálat men hain.
   (b) Un men *round* durust tariqe par bhare hue hain.

18. *Belt boxon* ka muláhaza karo.

Sardi ke mausim ki kárrawái.

Koshish karo kih *recoil* hone wále hisson men ragar yane un ke *recoil* hone men rukáwat jahán tak ho sake kam ho yane do aur tin *pound* ke darmiyán ho aur shuru shuru men *fuzee spring* ka wazan sát *pound* se ziáda na rakho. *Lock* men se pahle ka sára tel sáf kar lo, aur *extractor* ke *face* aur *slide* aur *extractor* ke *leveron* ko bhi tel se pák sáf rakho. *Barrel casing* par ghás, bori ya kambal lapet do. *Recoil* hone wále hisson ko kabhi kabhi háth se chala dia karo.

Namuna dikhákar batáo kih *gun* aur fáltu *barrel* ko *gun chest* men kis tarah band kia játa hai.

Retile mulkon men zaruri kárrawái.

Khayál rakho kih sirf thora sa tel istemál kia jáe. Kám karne wále purzon aur hisson par tel se nam kia hua kapra pher do. Is se rát ke waqt zang bhi lagne nahin páta aur purze bhi itne káfi chikne rahte hain kih *fire* karne men apna kám kar saken.

GYARAHWAN SABAQ.—*Fire* KARTE WAQT KHAYAL RAKHNE KI ZARURI BATEN.

1. ***Barrel casing* ke páni par nazar rakho.**—(Jab páni ek dafa khaulne lagta hai to jab tak khaulta rahta hai us waqt tak us ka páni do do *belt* pichhe koi derh derh *pint* ke hisáb se kam hota játa hai.)

2. **Yih dekho kih *belt*:—**
   (a) Har waqt *feed-block* ki thik sidh men rahe.
   (b) Be-rukáwat ázádi se chal sake.

3. Aisa bandobast karo kih tamám marammat zarurat parte hi ki jáe.

Lock **ki marammat.**—Jab *lock* ka koi purza badalna ho to zaruri hai kih sáre purze báqáida durust tartib se khole jáen, yahán tak kih us purze ki bári áe jise badalna ho.

Hán agar aisi surat men tuta hua *lock spring* badalna ho jabkih us ke tukre alág hokar gir gae hon to naya *lock spring*, purzon ko khole bagair jora ja sakta hai.

4. Aise mauqe ki kárrawái jab kih kuchh der ke lie ***fire*** **band kar dia gaya ho.**

(*a*) **In hisson men tel do:—**

Barrel ke ragar kháne wále hisson men.

Recoil hone wále hisson men (siwáe *muzzle cup* ke).

Extractor aur *lock* ke *faceon* men.

*Ramp*on men.

Trigger bar men.

(*b*) Dekhkar apna itminán kar lo kih *front cone*, *muzzle cup* aur *jamming handle* pure taur par kaskar lage hue hain aur *condenser tube* ka sira *condenser* men páni ki satah ke niche hai.

5. ***Gas*** **se bacháo ki tadbiren.**

Dekho *Pamphlet No.* 3, Chauthá Sabaq.

BARAHWAN SABAQ.—*Fire* KARNE KE BAD KI KARRAWAI.

(*a*) **Chándmári par.**—

(1) *Unload* karke *lock*, *muzzle attachment* aur *muzzle cup* kholkar alag kar lo.

(2) *Barrel* men se beruni mail, *cleaning rod* aur tel men tar ki hui falálain ki chindi istemál karke sáf karo. Phir *barrel* ko falálain ki sukhi chindi se sukha lo.

(3) *Cleaning rod* se kám lekar *barrel* men dobára tel lagáo.

(4) *Muzzle cup, muzzle attachment* aur *lock* men tel do.

(5) *Gun* ke hisson aur purzon ko dobára jor do.

(6) Khokhon men se jangi *round* chhánt lo.

(*b*) ***Line*** **men wápas áne par karne ke kám.**

(1) *Gun* ke hisson aur purzon ko kholkar sab ko achchhi tarah sáf kar lo.

(2) *Fuzee spring* ka wazan kam kar do.

(3) *Barrel* men se khaulta páni guzáro aur is ke bád agar zarurat samjho to *double pull-through* se kám lo.

(4) Is matlab ke lie kih *barrel* ki báhar wáli satah par jo bháp pasijkar lag gai ho us se zang na lagne páe, *barrel casing* men se sára páni nikál lo aur pechdár *plug* aur *cork plug* donon kholkar alag kar lo tákih *casing* ke andar báhar ki hawa áti jáe. Agar yih khayál ho kih *gun* kuchh dinon tak rakhi rahegi to *cannelure* aur *gland* donon men se *asbestos* ka *packing* kholkar alag kar lo.

(5) *Tripod belt*on, *belt box*on, *spare parts case* ke purzon aur *ammunition* ka achchhi tarah muláhaza karke unhen sáf kar lo.

Belt.—Jo *belt* bhige hue hon unhen sukha lo. Agar koi *belt* maila ya chikta ho to use is tarah sáf karo.—

Pahle kuchh páni men *soda* aur *soft soap* (charbi jaisa narm sábun) is hisáb se ghol do: Páni ke das hisse, *soft soap* ke tin hisse, *soda* ka ek hissa. Phir *belt* ko is *soda* aur *soft soap* mile hue páni men do ghante tak duboe rakho. Is ke bád *belt* ko *brush* márkar sáf karo. Jab sukh chuke to us ke kártus wále khánon men *belt plug* laga

do. *Belt plug* lagáte waqt bari hoshyár se kám lena cháhie, nahin to *belt* k kháne barh jáenge aur *round* un me dhile dhile rahenge.

Belt box.—Sára mail mitti wagaira sáf kar do, phi *box* ko báhar se ek tel lage hue kapre se ponchh dálo.

SECTION 4.—*GUN* KE HISSE AUR PURZE KHOLNA.

Instructor ke lie *note*.

Zaruri sámán.— *Gun, tripod, spare parts case* aur *box.*

(*i*) Niche di hui "Khayál rakhne ki báten" khás taur par zor dekar samjháo.

(*ii*) Athárahwán Sabaq us waqt tak shuru na karáya jáe, jab tak jawán Terahwen se Satrahwen Sabaq tak ke tamám kámon men pakke na ho jáen.

Terahwan Sabaq.—Khayal Rakhne ki Baten.

1. Durust auzáron se kám lo, masalan aise pechkash istemál karo jo pechon ki mutái ke liház se durust hon, *punch* bhi munásib mutái ke istemál karo, wagaira wagaira. Agar is qáide par amal na kia gaya to pechon ke sire kharáb ho jáenge aur phir sirf mistri hi unhen nikál sakega.

2. Churidár *axis pin* ko khenchkar nikálne se pahle dekh lo kih churián pure taur par khul to gai hain.

3. Jis waqt churidár *axis pin* phir lagáo zor se kám na lo, kionkih churián ziáda zor lagáe bagair ásáni se baith játi hain. Agar is bát ka khayál na rakha

gaya to churián jo kih niháyat patli aur mahin hoti hain is tarah katkar bigar jáengi kih *pin* dobára lagána námumkin ho jáega, masalan aise mauqe par jabkih *cover lock* ka pech ya churidár *axis pin* lagáya jáe.

4. Jab *rear cover* utháना ho to upar ko uchhálkar nahin balkih narm háth se utháo. Upar ko uchhálkar utháne se mumkin hai qabzon par zor pare aur wuh terhe merhe ho jáen. Is se pahle kih *cover* ko utáro apna itminán kar lo kih *lock* durusti se *gun* men laga hua hai. *Cover* ko utháte waqt *crank handle* ko *check lever* par se zara sa uthána cháhie.

5. *Front cover* band karne se pahle dekh lo kih *feed-block* durust jagah par aur *front cover catch* utha hua ho.

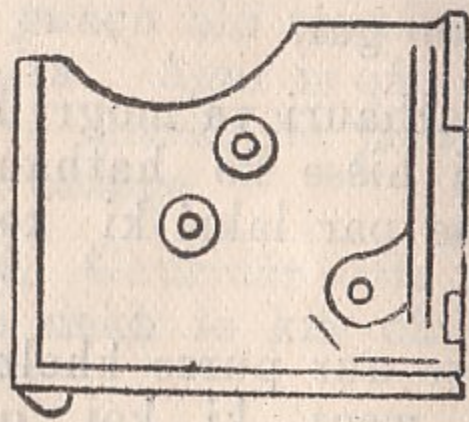
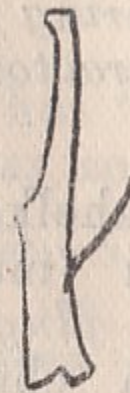
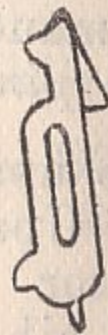
6. Kisi surat men bhi *firing pin* ko us waqt na chhurána cháhie jab tak *extractor* upar wále *stop* se laga hua na ho.

7. Jab koi aisa purza kholkar alag karna ho jo zanjir ke zarie laga rahta hai (masalan *outer casing split pin, cork plug, screwed plug* ya *tripod pin*) to zanjir ko zor se na khenchna cháhie, kionkih is se zanjir tut játi hai aur purza alag hokar ákhir men gum ho játa hai.

8. *Machine gun* aisi chiz hai kih agar munásib ihtiyát barti jáe to us ke purze bahut kam tutte hain aur us men nuqs bhi bahut kam parte hain. Jab koi purza tutta hai ya nuqs par játa hai to sirf is wajah se kih munásib ihtiyát barti nahin gai.

9. *Gun* ke kisi hisse par hathauri ya mogri ki chot hargiz na parne páe. Jab kisi hisse ko hathauri ya mogri se thonkna ho to us hisse par lakri ki koi chiz rakhkar thonka jáe.

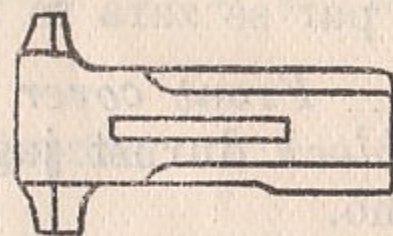
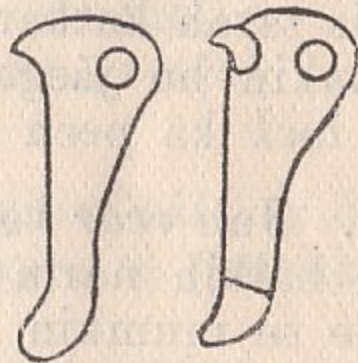
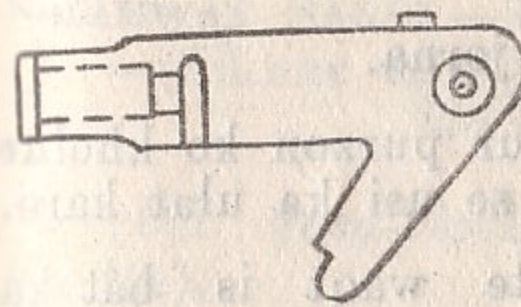
10. Jab kabhi *gun* ke hisse aur purze kholne men jawánon ka imtihán lia jáe to waqt ki koi qaid na lagái jáe, kionkih agar kholne ka kám jaldi jaldi aur be-ihtiyáti ke sáth kia gaya to *gun* ko nuqsán pahunchne ka andesha hoga.

Lock **ke hisson aur purzon ke nám us tartib menjis tartib se jore játe hain, báen se dahne ko parho.**

Lock casing.

Sear.

Firing pin.

Tumble.

Pins axis tumbler.

Trigger.

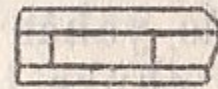
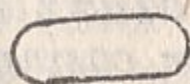
Pin axis Trigger

Extractor.

Extractor levers.

Side levers.

Bush axis.

Bush axis Keeper pin.

Lock spring.

COMPONENT PARTS OF EXTRACTOR.

Gib.

Gib spring cover.

Gib spring

Taswir 2.

Chaudahwan Sabaq.—*Gun* ke Hisse aur Purze Niche Batai Hui Tartib se Khole Jate Hain.

1. ***Lock.***—*Unload* karo aur *crank handle* ko khenchkar *roller* par láo. Phir *rear cover* ko upar utháo aur dekhkar apna itminán kar lo kih *extractor* gira hai. Ab *extractor* aur *stop* ke darmiyán ungli rakhkar *lock* ko utha do aur sáth hi *crank handle* ko áhista áhista áge ko chalne do yahán tak kih *side plate* se *lock* nikal jáe. Ab *lock* ko zara sa chakkar dekar nikál lo.

2. ***Muzzle attachment.***—*Split pin* ko báhar nikálo aur *outer casing* ko ghumákar alag kar lo. Ab *muzzle cup* ko pech kholkar alag karo.

3. ***Feed-block.***—*Front cover* uthákar *feed-block* ko báhar nikálo.

4. ***Fuzee spring box.***—Dahna háth *box* ke pichhe aur báyán háth áge rakhkar *box* ko dabáte dabáte áge ko sarkáo yahán tak kih *stud*on se alag ho jáe. Jab alag ho chuke to utár lo. *Fuzee chain* ko *spring* se alag karo aur *box* aur *spring* donon utár lo.

5. ***Fuzee.***—*Fuzee* ko pichhe ki taraf ghumáte jáo, yahán tak kih *stem* ke *lug* aisi jagah a jáen kih *fuzee* ásáni se khenchkar nikála ja sake.

6. ***Recoil* hone wále hisse.**—*Rear cover* ko upar utháo, phir T *fixing pin* ko kholkar *rear cross-piece* ko niche ki taraf kar do. Ab *right slide* aur *left slide* ko nikálkar *barrel* ko *side plate*on samet khench nikálo. Is ke bád *side plate*on ko *barrel* se alag kar do. (Báyán *side plate* pahle alag karo.)

***Gun* ke hisson aur purzon ko jorna.**

1. Jo kuchh *gun* ke hisson aur purzon ko kholne ke lie batáya gaya hai, ulti tartib se usi ka ulat karo.

2. *Barrel* aur *side plate* jorte waqt is bát ka bara khayál rakho kih *radial groove* upar hi ko rahe aur zor na lagáya jáe. Agar *side plate, barrel trunnion*on aur *crank shaft* par thik na baithen to *barrel* ko pichhe

ko khench lo aur *side plate*on ko thik se jor do nahin to bahut mumkin hai kih *crank shaft* men dánte par jáen.

Pandrahwan Sabaq.—Taswir 2.

***Lock* ke purzon ko kholna.**—Dekhkar apna itminán kar lo kih *lock cock* kia hua hai. Phir *side lever* ka *split pin* aur *axis bush* dabákar nikál lo. *Side lever*on, *extractor lever*on aur *extractor* ko nikálo. *Tumbler axis pin* ko dabákar *pin* aur *tumbler* nikál lo. Ab *lock spring* ko ázád karke *trigger axis pin* ko báhar dhakelo. Is ke bád *trigger, lock spring, firing pin* aur *sear* samet *spring* ko nikál lo.

Extractor ke purzon ko kholna.—*Gib spring cover* ko dabákar nikálo aur *spring* aur *gib* nikál lo.

***Lock* ke purzon ko jorna.**—

Jo kuchh upar *lock* ke purzon ko kholne ke báre men batáya gaya hai ulti tartib se usi ka ulat karo, siwáe is ke kih:—

(*a*) *Trigger* se pahle *tumbler* ko joro.

(*b*) *Lock spring* tab hi lagáya jáega jab kih báqi purze lagáe ja chuke hon. Lagáte waqt apna itminán kar lo kih *lock* ke sab purze *fired position* men hain aur *lock spring* ka lamba bázu *extractor* ki taraf hai.

Solahwan Sabaq.—*Feed Block* ke Purzon ko Kholna.—(Sikhne wále jawánon ke lie sirf *D. P. feed-block* istemál kia jáe.)

(*D.P. feed-block* sirf sikhlái ke kámon men istemál kia jáe).

Split pin ko dabákar nikálo. *Top lever* aur *bottom lever* ko alag alag karo. *Slide* nikál lo aur *spring* samet

*pawl*on ko alag kar lo. Phir *bottom pawl* ke *axis pin* ko khenchkar nikálo aur *spring* ko *pawl*on samet nikál lo.

Feed-block **ke purzon ko jorna.**—Upar batái hui kárrawái ka ulat ulti tartib se karo.

Sliding shutter **ko kholkar alag karna.**—*Catch* ko dabáo aur *shutter* ko áge ki taraf itna dhakelkar le jáo kih *stop* se ja lage. Phir *Number* 3 *punch* se *plunger* ko andar ki taraf dabáo aur *shutter* ko áge ki taraf dabákar le jáo, yahán tak kih wuh *breech casing* se nikal áe.

Satrahwan Sabaq.—Pani Nikale Bagair *Barrel* Badalna.

Yih faisala karne ke lie kih *barrel casing* men páni rahne dia jáe ya nahin, mauqe ki hálaton ko dekhna cháhie. Garm mulkon men páni ki ek ek bund qimati hoti hai. Larái ke maidán men mumkin hai kih páni mil hi na sake ya mile bhi to waqt par na mile. Aise mauqon par páni ka sanbhálkar rakhna achchha hai; magar *line* wagaira men jahán páni ásáni se mil sakta hai, *gun* ke purzon ko kholte waqt *barrel casing* ke páni ko bacha rakhna fuzul hai.

Purzon ko ám tartib se kholte jáo yahán tak kih *slide* alag kie ja chuken. Phir *elevating joint pin* nikálkar *gun* ka *muzzle* niche ko jhuka do. Is bát ka bara khayál rakho kih *direction dial* ko chot na lagne páe.

Direction dial ko chot se bacháne ke lie us par ek gaddi rakh leni cháhie.

Ab *Number* 2 ko hukm do kih ek chindi ya kapre ki gaddi *muzzle* ke munh par rakhe aur jab *recoil* hone wále hisse pichhe khenche ja rahe hon to is chindi ya gaddi ko *barrel* par dabáe rahe yahán tak kih chindi ya gaddi *muzzle* ke sáth sáth *barrel casing* ke agle

surákh tak pahunchkar use band kar de. Ab *recoil* hone wále hisson ko nikál lo.

Naya *barrel* lagáte waqt, jo kuchh upar batáya gaya hai, us ka ulat ulti tartib se karo.

Páni yun bhi bacháya ja sakta hai kih use *barrel casing* men se kisi bartan men dál dia jáe aur phir *barrel* ko ám tariqe par badal dia jáe.

Atharahwan Sabaq.—Chhote Purzon ko Kholna.

1. ***Front cone muzzle attachment.***—*Combination tool* se kám lete hue *front cone* ko *outer casing muzzle attachment* men se pech kholkar alag kar lo.

2. ***Muzzle attachment ka gland.***—*Combination tool* se kám lete hue *packing gland* ko *barrel casing* men se pech kholkar alag kar lo. Jorte waqt dekhkar apna itminán kar lo kih *gland* pure taur par kaskar baitha hai.

3. ***Front cover catch.***—*Spring* aur *plunger* alag karne ke lie *plug* ko andar ki taraf dabákar ek pech-kash ke zarie ¼ chakkar do. Is se *spring* ke dabáo se *plug* nikal parega.

Is se pahle kih *plunger* nikála jáe, use itna ghumána zaruri hai kih *slide* un *lug*on ko bachákar nikal saken jo *catch* par bane hote hain.

4. ***Tangent sight.***—*Axis pin* ko pech kholkar alag kar lo. Phir *tangent sight piston* aur *spring* alag kar lo.

5. ***Rear cover lock.***—*Axis pin* ko pech kholkar alag kar lo. Phir *rear cover lock* aur *spring* alag kar lo.

6. ***Trigger bar.***—*Rear cover lock* aur *trigger bar spring* alag karke *trigger bar* khench nikálo.

7. ***Roller.***—*Split fixing pin, collar* aur *roller* kholkar alag kar lo.

SECTION 5.—SPARE PARTS (FÁLTU PURZE)—HIDÁYATEN.

Instructor ke lie *note.*

Zaruri sámán.— *Gun, tripod, spare parts case* aur *spare parts box.*

1. Achchhi tarah zor dekar samjháo kih tamám *machine gunner*on ko jánna cháhie kih *gun* ke sáth kaun kaunse fáltu purze le jáne cháhien aur kaun kaunse nahin. Un ko yih bhi jánna cháhie kih kaunsa fáltu purza kahán rakha hai, tákih waqt par dhundna na pare. Har ek fáltu purze ko us ke asli nám se pukárna zaruri hai. Har ek *box* men jo jo chizen kam hon unki ek fihrist rakhni cháhie. Zor de dekar jawánon ko yih bhi batáo kih jab kabhi mauqa mile fáltu purzon ki partál karni zaruri hai. Jo chizen tut phut ya kho kha gai hon un ki *report* fauran hi karni cháhie. Fáltu purzon par zara sa tel lagáe rakhna zaruri hai.

Sikhlái is tartib se di jáe.

Pahle *spare parts box, spare parts case,* aur *wallet* ke tamám purze nikálkar bichha do, phir jawánon ko is tariqe par sikhlái do:—

Spare parts ki sarkári fihrist ke mutábiq durust tartib se har ek chiz uthákar dikháo aur us ka durust nám batáo. Jo purza jo kám deta ho bayán karo.

UNNISWAN SABAQ.

Spare parts box, spare parts case aur *wallet* ka bayán karo. Phir har ek purza dikhákar us ka nám batáo aur sáth hi yih bhi batáo kih kaunsa purza kya kám kis tarah deta hai.

BISWAN SABAQ.

Purzon ko *spare parts box* aur *wallet* wagaira men rakhne ka tariqa sikháo.

Wuh auzár aur purze jo *wallet* men rakhe rahte hain.

Cork	1
Cup, muzzle	1
Disc, muzzle attachment	1
Fuzee, chain samet	1
Gib	1
Pins, trigger	1
Pins, tumbler	1
Pins, firing	1
Pins, split, keeper ⅛×2½ *inch* (*Mk.* IV *tripod mounting* ke lie)	3
Pliers, cutting, pairs	1
Protector, muzzle	1
Pull-through, double	1
Punches, No. 3	1
Punches, No. 5	1
Reflector, mirror	1
Screw drivers, small	1
Sear, spring samet	1
Spring, gib	1
Spring, lock	2
Trigger	1
Tumbler	1
Washers, adjusting, No. 1. ·003	3
Washers, adjusting, No. 2. ·005	3

Wuh auzár aur purze wagaira jo *spare parts case* men rakhe rahte hain.

Balance, spring	1
Can, oil	1
Falálain *lutin pad*on ko bándhne ke lie, gaz ...	8
Lock	1

Lutin, ozs. 6
Plug, clearing 1
Spring, fuzee 1
Tool, combination 1
Wallet 1

Wuh auzár, purze wagaira jo *spare parts box* men rakhe rahte hain.

Blocks, feed 2
Boxes, tin, chhote chhote purzon ke lie ... 3
Bushes, axis, side levers 1
Collars, roller 1
Cork 1
Cups, muzzle attachment 1
Disc, muzzle attachment 4
Eyelets, long, ozs. ... ... ½
Fuzee, chain samet 1
Gib 1
Gland, packing 1
Hammer 1
Lever, extractor, left 1
Lever, extractor, right 1
Packing, asbestos (pánch pánch gaz ke tukre) ... 4
Pins, trigger 1
Pins, tumbler 1
Pins, firing 2
Pins, fixing crank handle 1
Pins, split, collar, roller 2
Pins, split, keeper, $\frac{1}{8} \times 2\frac{1}{2}$ *inch* (*Mk.* IV *tripod mounting* ke lie) 6
Pins, split, bush, axis, side lever 1
Pins, split, check nut, long 3

Pins, split, muzzle attachment 1
Pins, "T" fixig rear crosspiece ... 2
Plugs, belt 1
Plugs, cork, complete 1
Plugs, screwed 1
Plugs, front cover catch 2
Plungers, front cover catch 2
Roller 1
Screws, clamp, checking traverse 1
Screw drivers, large 1
Sights, night, back and fore, each 1
Sights, fore 1
Slights, tangent 1
Spanner, shifting 1
Springs, bottom pawl 1
Springs, cover lock 2
Springs, front cover catch 2
Springs, gib 1
Springs, lock 4
Springs, safety catch piston samet 2
Springs, sear 2
Springs, shutter catch 2
Springs, tangent sight 1
Springs, top pawl 2
Springs, trigger bar 2
Strips, long 25
Strips, short 25
Tool, repairing belts 1
Wire gauze (tukre) 4
Washers, packing nut elevating (*tripod Mk.* V) ... 6

Note.—Upar purzon wagaira ki jo fihrist di hui hai, wuh "·303-*inch Vickers Machine Gun Handbook,*

1930" se naql ki gai hai; lekin "*Equipment Regulations, India*" ke mutábiq kárrawái karte waqt purzon wagaira ki fihriston men niche batái hui tabdili ki jati hai:—

***Wallet* men rakhe rahne wále purze wagaira.**

Fihrist men yih barháo:—

Pull-throughs, gauze A, tukre. ... 2

***Spare parts box* men rakhe rahne wále purze wagaira.**

Fihrist men yih barháo:—

Pins, split, spare, 1/16″×1″ 3

Yih tabdili karo:—

Screws, clamp, checking traverse (1 ke bajáe) har 6 *box* pichhe 3

Yih kát do:—

Pins, split, check nut, long 3

SECTION 6.—ROKEN AUR FAURI ILAJ.

Instructor ke lie *note*.

Is matlab ke lie kih rokon ka iláj karne men jawán khub hoshyár ho jáen, zaruri hai kih *instructor* jo roken dále durust tariqe par dále tákih *No.* 1 durust fauri iláj kar sake.

Roken dálne ki sikhlái sirf uhdadáron ko di jáe.

Niche die hue naqshon men roken dálne ke tariqe aur munásib fauri iláj wagaira batáe gae hain. Naqshon ke mukhtalif khánon men die hue kám in *machine gunner*on ko sikháe jáen:—

(*a*) Pahle, tisre aur chauthe kháne men die hue kám ...	Tamám *machine gunner*on ko.
(*b*) Chauthe aur pánchwen kháne men die hue kám ...	In ki sikhlái *machine gunner* ko us waqt di jáe jab wuh fauri iláj karne men pakka ho jáe.
(*c*) Pahle, dusre, tisre, chauthe aur pánchwen kháne men die hue kám ...	Tamám *instructor*on ko.

Zaruri sámán.

Gun aur *tripod*.

Belt aur *dummy round*.

Chapta kártus.

Tute hue kártus ka agla hissa aur aisa tuta hua kártus jis ka ek hissa dusre par charh gaya ho.

Spare parts case.

Crank handle dhánpne ke lie kapra.

Shist lene ka nishán.

Fauri iláj karne ka tariqa sikháne ki yih tartib honi cháhie:—

1. Rok dálna.
2. Namuna dikháte hue bayán karna.
3. Jawánon se sawál karna.
4. Jawánon se mashq karána.

1. Jawán *gun* ke dahni taraf aisi jagah baithe hon jahán se *crank handle* dikhái deta ho aur *instructor* jo kám kare wuh sáf nazar áe.

2. Sabaq shuru karne par *target* ke taur par ek nishán hamesha muqarrar kia jáe.

3. Jis waqt *instructor* rok dál raha ho, *No.* 1 aur *No.* 2 sir kisi aur taraf ko more hue *gun* par "*rest*" ki

position ikhtiyár kie hue hon. *Instructor* pahle to "*position*" phir "*fire*" ka hukm de, phir *crank handle* par se kapra hatáe. Is ke bád *No.* 1 aur *No.* 2 fauri iláj ki kárrawái karen.

4. Rok thik usi tarah dáli jáe jis tarah bayán kia gaya hai.

5. Fauri iláj ki kárrawái us waqt tak puri na samjhi jáe jab tak durusti ke sáth dobára shist lekar *fire* na kia ja chuke.

6. *Rear cover* aisi hálat men kabhi na khola jáe jab kih *lock* pure taur par apni jagah par baitha ho ya *tangent sight* utha hua ho.

7. Jis surat men *lock*, khenchne se pichhe ko na khich sake, *front cover* kholkar *extractor* ko dabákar niche kar do.

8. Zaruri hai kih jab *front cover* ya *rear cover* utárkar band kia jáe to pure taur par durusti ke sáth band kia jáe.

9. *Lock* kabhi aisi hálat men badla na jáe jab *extractor* ke *face* par *round* lage hue hon.

10. Baz dafa *gun* men *lock* na laga hone ki hálat men *lock spring* ko chhurána parta hai. Aise mauqe par *extractor* ko is tarah khari *position* men rakho kih *firing pin* ke sámne, *firing pin hole* ho, phir is ke bád *lock* ka *spring* chhura do.

11. Jis surat men *No.* 2 bhi fauri iláj ki kárrawái men madad kare, use us ke kám sab se pahle sikháe jáen.

12. Jab jawán yih kám achchhi tarah sikh jáen to andhere men ya *No.* 1 aur *No.* 2 ki ánkhon par patti bándhkar sikhlái di jáe.

13. Sab se ákhir men jawánon ko *No.* 2 ki madad ke bagair fauri iláj karne ki mashq karái jáe.

Ikkiswán **sabaq.**	Pahli *position* wáli rok.
Báiswán **sabaq.**	Dusri *position* wáli rok.
Teiswán **sabaq.**	Tisri *position* wáli rok.
Chaubiswán **sabaq.**	Chauthi *position* wáli rok.
Pachchiswán **sabaq.**	Khás khás roken.

Note.—Pachchiswen Sabaq ki sikhlái (khás khás roken dur karne ki sikhlái) us waqt tak na di jáe, jab tak jawán Ikkiswen, Báiswen, Teiswen aur Chaubiswen Sabaq ke kámon men pakke na ho jáen.

Chhabbiswán **sabaq.** Rok parne ke sabab.

Zaruri sámán.—Wuhi sámán jo fauri iláj ki kárrawái ke lie muqarrar hai. Iske aláwa *skeleton lock*, fáltu *feed-block* aur sikhlái dene ke naqshe.

Tartib.

(*a*) Rok dálna. *Number* 1 aur *Number* 2 fauri iláj ki kárrawái karen.

(*b*) Rok dobára dálna.

(*c*) Jawánon se sawál karke puchhna kih is rok ka *gun* ki chál par kya asar kaise para.

(*d*) Jawánon se sawál karna.

(*e*) Sirf *instructor*on ke lie:—

(*i*) Sikhlái dene ke lie rok dálna.

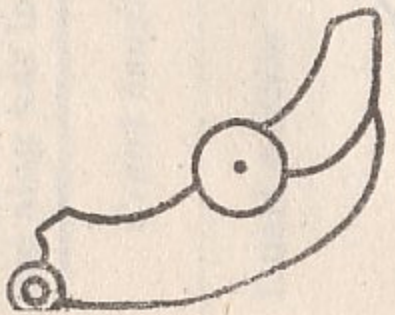
(*ii*) Chándmári par *fire* karte men rok dálna.

Chhabbiswen Sabaq ki sikhlái us waqt di jáe jab jawán Ikkiswen se Pachchiswen Sabaq tak ke tamám kámon men pakke ho jáen.

1. *Gun* ke harakat karne wále hisson aur purzon men kharábi paida hone se jo roken par játi hain, wuh do bari qismon men taqsim ki ja sakti hain, yane:—

(*a*) Árizi roken. Yih roken chár sababon se par sakti hain:—

(*i*) *Fire* shuru karne se pahle ya *fire* karte waqt jin báton ka khayál rakhna zaruri hota hai un ka khayál na rakhna.

(*ii*) *Ammunition* men nuqs hona.

(*iii*) *Gun team* ke jawánon ka pure taur par sikha hua na hona.

(*iv*) *Gun* ke kisi aise purze ka bigar jána, jis ki tabdili ke lie fáltu purza maujud ho.

(*b*) Der men durust hone wáli roken. Yih roken *gun* ke kisi aise hisse ke bigar jáne se parti hain jise *gun team*, dushman ke *fire* ke niche rahte hue ya *armourer* ki madad ke bagair durust nahin kar sakta. Is qism ki roken parne se *gun* lázimi taur par kam ya ziáda arse ke lie bekár ho játi hai.

2. Árizi rokon ke fauri iláj ki kárrawái ka jald ya der men hona is bát par munhasir hota hai kih *gun team* ke jawánon ne kahán tak kám sikha hai aur kahán tak unhen us ki mashq karái gai hai.

Pahli *position* wáli rok.

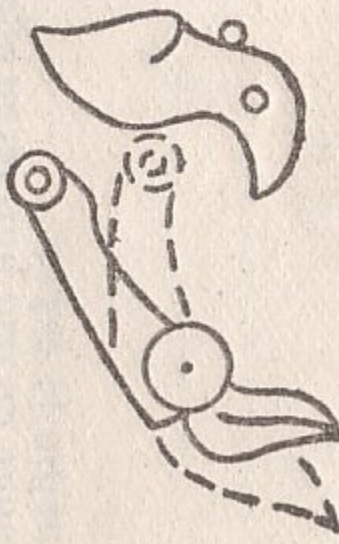
Crank handle ki *position*	Roken dálne ka tariqa.	Fauri iláj	Rokon ko dobára parne se rokna.	Rok gáliban kis wajah se pari.
Pahli *position*	*Half load* karo: *Crank handle* ko áhista se pichhe ki taraf khenchte jáo, yahán tak kih *extractor* ke sing *cam*on ke *step*on men a jáen; phir *crank handle* ko chhor do aur *belt* ko *left front* ki taraf khencho. *Note*:—Siwáe us hálat ke jab kih kamzor bárud ke sabab se rok par gai ho har hálat men sikhlái ke lie rok dálkar taiyári ki kárrawái duhráni zaruri hai.	(i) *Crank handle* ko ghumákar *roller* tak le áo, *belt* ko *left front* ki taraf khencho aur *crank handle* ko chhor do. (ii) Agar is par bhi yihi rok dobára par jáe to (i) men batái hui kárrawái phir karo aur *fuzee spring* ko itna halka kar do kih "khit" ki áwáz tin dafa áe.	(ii) *Fire* karne se pahle aur *fire* karte waqt jin báton ka khayál rakhna zaruri hota hai un ka khayál rakho.	*Extractor* gira nahin jis ka sabab yih hosakta hai:— (i) Kam bárud. (ii) (*a*) *Fuzee spring* ke wazan ka ziáda hona. (*b*) Chalne wále purzon men tel na hona. (*c*) Chalne wále purzon men mail ya ret hona. (*d*) *Packing* ziáda hona. (*e*) *Barrel* ka ghisa hona. (*f*) *Belt* ke khánon ka tang hona.
Agar *crank handle* ki yih *position* ho to samajh lena cháhie kih *lock* itna pichhe ko nahin a sakta kih *extractor* ko girne de.	Jab bár bár parne wáli rok dálni ho to *instructor* "*gun* do chár *round fire* karke phir band ho játi hai" pukáre.	(iii) Agar (i) men batái hui kárrawái karne par bhi *crank handle* áge ko chalte chalte usi *position* par ruk jáe to *crank handle* ko ghumákar *roller* tak le áo, *rear cover* ko kholo aur *extractor* ke *face* par se *round*		

Crank handle ki *position.*	Roken dálne ka tariqa.	Fauri iláj,	Rokon ko dobára parne se rokna.	Rok gáliban kis wajah se parl.
	Aisi rok dálne ke lie jo kamzor ya tute hue *gib spring* ke sabab se parti hai *half load* karo, *rear cover* kholo, *lock* ko khenchkar upar utháo, *cartridge* ko *extractor* ke *face* par ádhi dur tak khiskákar *gib* ke nichle *projection* ke niche tak kar do, *lock* us ki jagah par phir laga do aur *belt* ko *left front* ki taraf dabáo. Chándmári ke waqt (bár bár parne wáli roken).—*Fuzee spring* ka zor barha do.	hatákar *lock* badal do aur tel dekar phir *load* karo.		(*g*) Jame hue páni ya tel ki ragar hona. (iii) *Gib spring* ka kamzor ya tuta hona.

Dusri *position* wáli rok.

Is se pahle kih dusri *position* wáli rok ka fauri iláj sikháya jáe, *clearing plug* se kám lene ki sikhlái is tariqe par di jáe:—

Aisa *case* nikálne ka tariqa jo tutkar do tukre ho gaya ho. *Clearing plug* ko lekar (aur yih dekhkar kih *centre pin* pichhe ki taraf hai) us ko *chamber* men dál do. *Lock* ko áhista áhista áge jáne do aur *pin* ko dabákar us ki thik jagah par kar do. Phir *crank handle* ko mazbuti se pakre pakre *clearing plug* ke daste ko dahne báen hiláo, *crank handle* ko pichhe ki taraf khencho aur *clearing plug* ke daste ko thonk-kar pichhe kar do aur *clearing plug* ko *chamber* men se khenchkar nikál lo. Ab dekha jáega kih *case* ka jo agla hissa tutkar alag ho gaya hai, wuh *clearing plug* ke sire par charhkar us ke sáth nikal áya hai. Is ke bád *centre pin* ko thonk-kar phir us ki jagah par laga do aur tute hue khokhe ka jo hissa *clearing plug* par charha hua hai use alag kar lo.

Crank handle ki *position.*	Roken dálne ka tariqa.	Fauri iláj.	Rokon ko dobára parne se rokna	Rok gáliban kis wajah se pari.
Dusri *position*	(i) (*a*) *Belt* men sab se áge ek chapta *dummy round* dálkar *load* karo. Chándmári ke waqt.—Ek chapta *dummy round belt* men dál do. (*b*) *Half load* karke *rear cover* kholo aur *lock* ko pichhe ki taraf khenchkar utháo. Phir us *round* ki goli par jo *extractor* par hai ek aise *case* ka agla hissa charhákar	(i) *Crank handle* ko pichhe ki taraf khencho aur pukáro "*clearing plug*". *Rear cover* ko kholo, *lock* ko utháo aur *extractor* ke *face* par jo kártus ho us ka muláhaza karo. Agar kártus chapta ho ya thik ho, lekin kisi tute hue *case* ka agla hissa us ke sáth laga hua ho, to "Nahin	(i) (*b*) aur (ii) Agar *case*on ke do do tukre barábar hote jáen to *lock* badal do. Agar is par bhi *case*on ke do do tukre hote jáen to *lock* alag kar lo aur *adjusting nut* ke áge ek *No.* 1 aur ek *No.* 2 *washer*	(i) (*a*) Chapta kártus. (*b*) Tuta hua *case* jis ka agla hissa dusre *round* par charhkar us ke sáth nikal áya hai.

Crank handle ki *position.*	Roken dálne ka tariqa.	Fauri iláj.	Rokon ko dobára parne se rokna.	Rok gáliban kis wajah se pari.
Agar yih *position* ho to samajh lena cháhie kih *lock recoil* hone ke bád puri tarah áge nahin ja sakta.	mazbuti se phansa do jo tutkar alag ho gaya ho. Ab *lock* ko phir us ki jagah par rakhkar *rear cover* ko band kar do aur *belt* ko khenchkar *crank handle* ko áhista áhista áge jáne do. *Note.*—Dusra tariqa yih hai kih ek *dummy round* istemál karo jis ke agle sire par ek tute hue *case* ka agla hissa jhálkar jor dia gaya ho.	cháhie" pukáro aur *extractor* ke *face* ko sáf karke *re-load* karo.	lagáo. Pahle hi mauqe par in *washer*on ko *adjusting nut* ke pichhe laga dia jáe. *Note.*—*Armourer* ko is ki *report* di jáe.	
	(ii) *Half load* karke *crank handle* ko *roller* par láo, *rear cover* ko utháo aur *lock* ko uthákar báhar nikál lo. Phir tute hue *case* ke agle hisse ko *extractor* ki goli par narmi se charhákar	(ii) Agar *extractor* par ek aisa achchha *round* ho jis ki goli par dusre tute hue *case* ka agla hissa phanskar na charha ho to *extractor* ke munh ko sáf karke aur *crank handle* ko	...	(ii) Tuta hua *case* jis ka agla hissa *chamber* men rah gaya hai.

Crank handle ki *position.*	Roken dálne ka tariqa.	Fauri iláj.	Rokon ko dobára parne se rokna.	Rok gáliban kis wajah se pari.
	lock ko áhista se áge chalne do. Yih kám is tarah karo kih *case* ka tuta hua hissa *chamber* hi men rah jáe. Ab *rear cover* ko band karo aur *belt* ko *left front* ki taraf khencho.	*roller* par qáim rakhte hue *lock* ko phir *gun* men lagáo. Ab *clearing plug* ko kám men láo aur dobára *load* karo.		

Tisri *position* wáli rok.

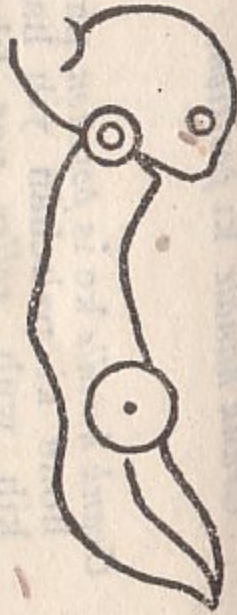
Is se pahle kih tisri *position* wáli rok ke fauri iláj ka chautha darja sikháya jae jis men *extractor* ko márkar niche karne ki zarurat hoti hai, *clearing plug* se kám lene ka durust tariqa sikháya jáe. Wuh tariqa yih hai—Pahle *clearing Plug* ke daste ka uparla sira báen háth se is tarah pakro kih *plug* ka gáo-dum hissa bhinchi hui mutthi ki uparli satah par tika rahe. Ab *clearing plug* ke daste ke sire ko *extractor* ki uparli satah par rakhkar *clearing plug* ko dahne háth se chatak se márkar niche kar do.

Crank handle ki *position.*	Roken dálne ka tariqa.	Fauri iláj.	Rokon ko dobára parne se rókna.	Rok gáliban kis wajah se pari.
Tisri *position*	(i) *Half load* karo, phir *crank handle* ko ghumákar *roller* tak le áo aur *roller cover* ko uthákar *belt* ko itna khencho kih ek kártus *feed-block* ke andar sire se ádhe fásile tak chala jáe. *Crank handle* ko áhista áhista áge jáne do tákih wuh *third position* men rahe aur *rear cover* ko band kar do.	(i) *Crank handle* ko zara sa utháo, *belt* ko *left front* ki taraf khencho, *crank handle* ko chhor do aur háth ki hatheli *crank* par is tarah tirchhi máro kih *crank handle check lever* par baith jáe.	(i) *Belt* men bhare hue *round*on ka mulháaza karo, kahin un men koi kharábi to nahin.	(i) Kártus *feed block* men zara tirchha hai.
Agar yih *position* ho to samajh lena cháhie kih *extractor* apni sab se unchi *position* men nahin ja sakta,	(ii) *Load* karo, lekin *crank handle* ko dobára áhista áhista áge lejána zaruri hai tákih tisri *position* men rah jáe. *Note*:—Agar ragar ke sabab se rok par gai ho to sikhlái ke lie dobára rok dálkar dikhána zaruri hai.	(ii) Agar rok dobára par jáe to fauri iláj ki kárrawái ko duhráo. Phir *belt* nikále bagair *unload* karke chalne wále purzon ko tel do aur dobára *load* karo.	(ii) *Fire* karte waqt ki hidáyaton ka khayál rakho.	(ii) *Lock* wagaira men ragar hona.
Agar *feed-block slide* atka hua ho, to *feed* men nuqs hoga.	(iii) *Belt* men se chauthe *round* ko koi ádh *inch* báhar nikálo. Phir *half load* karo aur *crank handle* ko áhista se pichhe khencho yahán tak kih *extractor* ke sing *camon* ke *step*on men lag jáen. *Crank handle* ka *knob* áge ki taraf aur us ki dum pichhe ki taraf khenchkar *recoil* hone wále hisson ko khench lo; sáth hi *belt* ko báin taraf khencho. *Crank handle* ko *roller* par le áo, aur áhista se áge jáne do. Chándmári ke waqt.—Ek *belt* men *ammunition* buri tarah bharo ya ek pital ke lambe pattar ko mor do, ya *belt box* ko *feed-block*	(iii) Agar (i) men batáe hue iláj se kám na chale to *feed-block slide* ko dekho. Agar wuh phanskar rah gaya ho to *No.* 1 "*feed block*" pukáre, *crank handle* ko khenchkar *roller* par le áe (is matlab ke lie baz dafa is bát ki zarurat parti hai kih *No.* 2 *extractor* ke singon ko dabákar niche kar de), *rear cover* ko utháe aur *lock* ko *hang* kar de. Iske bád *No.* 1 *recoil* hone wále hisson ko pichhe ko khenche aur *No.* 2 *top pawl*on ko niche kare aur *belt* ko khenche. Is par *No.* 1 *recoil* hone wále hisson ko áge chalne deta hai, jis se	(iii) *Fire* karne se pahle aur *fire* karte waqt ki hidáyaton ka khayál rakho. *Note*;—Tisri *position* men rok ziádatar *belt*on ko buri tarah bharne ki wajah se parti hai.	(iii) (*a*) Lambe pital ke patre ka mura hua hona ya us men kuchh nuqs hona. (*b*) Buri tarah se bhara hua *belt.* (*c*) *Belt* ke khánon ka ghisa hua ya dhila hona. (*d*) *Belt box* ka *feed-block* ki thik sidh men na hona.

Crank handle ki *position.*	Roken dálne ka tariqa.	Fauri iláj.	Rokon ko dobára parne se rokna.	Rok gáliban kis wajah se pari.
	se tirchhe rukh par rakho.	*feed-block slide* báin taraf ko sarak játa hai. Phir *No.* 2 *belt* men *round*on ko sidha kare, *No.* 1 *rear cover* ko niche kare, *crank handle* ko *roller* par khenchkar le áe aur *belt* ko *left front* ki taraf khenchkar *crank handle* ko áge jáne de.		
	(iv) Ek bigre hue pende wála *dummy round, belt* men sámne se dusre *number* par rakho, phir *load* karke *crank handle* ko dusri bár áhista se áge jáne do. *Extractor* ke *groove*on ko nuqsán se bacháne ke lie (sikhlái dete waqt) ek aisa *dummy cartridge* istemál	(iv) Agar *slide* sakht na ho to *Number* 1 "*Extractor*" pukáre aur *front cover* ko khole. *Number* 2 *extractor* ke singon ko niche daba de. *Number* 1 *extractor* ke munh ko sáf kare. *Number* 2 *pawl*on ko dabáe, *belt* ko khenche aur *belt* men se pahla kártus nikále, phir *Number* 1 *front cover* ko band kar de aur dobára *load* kare.	...	(iv) Ek bigre hue pende wála *round.*

	kia ja sakta hai jo pende ke pás se phula hua ho. Aise mauqe par *gun* ko *load* karne se pahle us *cartridge* ko *belt* men pahle *round* ke taur par lagáya jáe. *Note.*—Chándmári ke waqt is rok ki mashq na karni cháhie, kionkih mumkin hai kih pende ke bigre hone se *extractor* ke *groove* kharáb ho jáen			

Chauthi *position* wáli rok.

Crank handle ki *position*	Roken dálne ka tariqa	Fauri iláj.	Rokon ko dobára parne se rokna.	Rok gáliban kis wajah se pari.
Chauthi *position.*	(i) *Load* karo. Jaise hi *crank handle* áge ko chale *thumb-piece* ko dabáo. Chándmári ke waqt.—*Belt* men ek *dummy round* lagáo	(i) *Crank handle* ko khenchkar *roller* par le áo, *belt* ko *left front* ki taraf khencho aur *crank handle* ko chhor do.	...	(i) *Misfire.*

Crank handle ki *position.*	Roken dálne ka tariqa.	Fauri iláj.	Rokon ko dobára parne se rokna.	Rok gáliban kis wajah se pari.
	(ii) *Load* karo aur jaise hi *crank handle* áge ko chale *thumb-piece* ko dabáo. *Number* 1 ke fauri iláj karne par *instructor* pukáre "*gun fire* nahin karti."	(ii) Agar (i) men batái hui kárrawái karne se iláj na ho to (*belt* ko nikále bagair) *lock* badalkar dobára *load* karo.	...	(ii) (*a*) Tuta hua ya bigra hua *firing pin.* (*b*) Tuta hua *lock spring.*
	Chándmári ke waqt.—*Belt* men do *dummy round* lagáo.			
Agar yih *position* ho to samajh lena cháhie kih *round fire* nahin hua, aur agar wuh *fire* hua hai to *recoil* awwal to hua hi nahin aur agar hua bhi hai to bahut thora. Is lie *lock* agli *position* men hi rah gaya hai.	(iii) Jaise hi *crank handle* áge ko chale *thumb-piece* dabáo. *Belt* ka itna hissa *feed-block* men dál do kih pahla *round bottom pawlon* ke *finger-piece* ki sidh men a jáe.	(iii) Agar (i) men batái hui kárrawái karte waqt *Number* 1 yih dekhe kih *belt* mamuli se ziáda báin taraf ko áya hai to *load* karne ki harakaton ka dusra hissa kare.	(iii) *Belt*on ka muláhaza karo.	(iii) *Belt* men kháli khána.
	Chándmári ke waqt.—*Belt* men ek khána kháli chhor do.			

Khás khás roken.

Crank handle ki *position.*	Roken dálne ka tariqa.	Fauri iláj.	Rokon ko dobára parne se rokna.	Rok gáliban kis wajah se pari.
Crank handle ke is *position* par hone ki pahchán yih hai kih wuh *roller* par tika hoga.	*Half load* karke *fuzee spring box* aur *fuzee spring* donon ko kholkar alag kar lo. Phir *crank handle* ko khenchkar *roller* par le áo. *Belt* ko *left front* ki taraf khencho, *fuzee spring* ko *fuzee* se alag karke *fuzee spring box* ko phir se jor do.	*Fuzee spring box* ko kholkar alag kar lo aur *belt* ko *left front* ki taraf khenchkar *crank handle* ko phir *check lever* par le áo. Ab tuta hua *fuzee* (ya *fuzee spring* jaisi surat ho) nikálkar us ki jagah dusra *fuzee* (ya *fuzee spring*) jor do. Agar *fuzee spring* tut gaya ho to dusra *spring* jorne ke bád durusti se wazan kar lo.	...	Tuta hua *fuzee* ya *fuzee spring.*

Khás khás roken.

Crank handle ki *position.*	Roken dálne ka tariqa.	Fauri iláj.	Rokon ko dobára parne se rokna.	Rok gáliban kis wajah se pari.
Crank handle ke is *position* par hone ki pahchán yih hai kih *extractor* apni sab se unchi *position* tak nahin uth sakta.	*Belt* men pahle aur tisre *round* ke taur par do aise *dummy round* lagáo jo pende ke qarib phul gae hon. Phir *crank handle* ko áhista áhista dobára áge ko le játe hue *load* karna shuru karo. Jab *crank handle* áge ko chalte chalte ruk jáe to use halke háth se niche ko máro.	Agar fauri iláj ki kárrawái karne ke bád phir se *load* karne par rok usi tarah par jáe to fauri iláj ki kárrawái duhráo aur *lock* badal dálo.	...	(*a*) Bigre hue *cartridge groove* ya (*b*) Tuta hua *gib spring* ya (*c*) Tuta hua *gib.*
	(*a*) (*b*) (*c*) *Unload* karke *lock spring* ko chhura do. Phir *belt* ko itna khencho kih us men laga hua pahla *round bottom pawl* on ke sámne a jáe. Ab jawán ko cháhie kih fauri iláj ki wuhi kárrawái kare jo tute hue *lock spring* ke lie kia játa hai. Jab jawán yih kárrawái kar chuke to us ko yih batáya jáe kih *gun* sirf do *round fire* karke ruk gai hai aur *crank handle* phir usi *position* par ákar ruk gaya hai. (Yih dekhkar us ko *feed-block* ka muláhaza karna cháhie. Tuta hua purza usi men páya jáega.)	(*a*) (*b*) (*c*) Fauri iláj ki wuhi kárrawái karo jo chauthi *position* wáli rok ke lie ki játi hai. *Lock* ke badal die jáne ke bád *gun* do *round fire* karke ruk játi hai aur *crank handle* usi *position* par ákar rah játa hai. *Feed-block* badal dia jáe.	...	Tuta hua:— (*a*) *Upper lever* ya (*b*) *Lower lever* ya (*c*) *Top pawl* ya *spring.*
	(*d*) Rok usi tarah dálo jis tarah *belt* men kháli kháne ke lie dáli játi hai. Jab jawán upar batái hui rok ke fauri iláj ke lie durust kárrawái kar chuke to use batáya jáe kih *gun* sirf do *round fire* karke phir usi *position* par ruk gai hai.	(*d*) Fauri iláj ki wuhi kárrawái karo jo *belt* men kháli kháne ke lie ki játi hai. *Gun* do *round fire* karke phir usi *position* par ruk jáegi. Is par *feed-block* badal dia jáe.	...	(*d*) *Bottom pawl* ya *spring.*
	1. "*Load*" ka hukm do. Jaise hi *crank handle* dusri dafa *check lever* se á lage "*gun fire* kar rahi hai" pukáro.	1. *No.* 1 *belt* men se ek *round* nikále.	...	(*a*) *Trigger* ki nák ya *tumbler* ke *bent* ka tuta ya ghisa hona.

Crank handle ki *position.*	Roken dálne ka tariqa	Fauri iláj.	Rokon ko dobára parne se rokna.	Rok gáliban kis wajah se pari.
	2. Pahle "*load* aur *fire*" phir "*stop*" ka hukm do. Jaise hi *No.* 1 *thumb-piece* par se dabáo hatáe "*gun* barábar *fire* kar rahi hai" pukáro.	2. Jab *gun* ka *fire* band ho jáe to wuh *crank handle* ko khenchkar *roller* tak le áe. 3. *No.* 2 *belt* ko alag kar le. 4. *No.* 1 *crank handle* ko ázád kar de. Phir *lock* khatre bagair badla ja sakega.	...	(*b*) *Trigger axis pin* se upar *lock spring* ke chhote bázu ka tuta hona.

Note:—Agar rok kisi aisi *position* par par jáe jis men *thumbpiece* par se dabáo hatákar *gun* ka *fire* band na kia ja sake to fauri iláj ki hamesha yih kárrawái ki jáe:—*Crank handle* ko *roller* par lákar *belt* alag kar lo. Agar dusri *position* wáli koi rok par jáe to is bát ka khayál rakhna niháyat zaruri hai kih *round* nikalte waqt *extractor* barábar niche ko daba rahe.

SECTION 7.—MARAMMAT.

Instructor ke lie *note.*

Zaruri sámán.—*Gun, tripod, belt box* aur *belt, dummy roundon* samet *spare parts case* aur *spare parts box*, puráne *belt* ke kuchh tukre káfi falálain aur *luting.*

Foresight dahne báen hatákar nishána thik karne ki sikhlái mamuli sipáhion ko na di jáe.

Agar *luting* na mil sake to sikhlái ke lie us ke bajáe koi bhi munásib chiz kám men lái ja sakti hai, masalan *plasticine*, ya potin wagaira.

SATTAISWAN SABAQ.—*Gun* men purze jorna aur marammat karna.

(a) *Muzzle attachment* men naya *disc* lagana.

Front cone ko utár lo. *Disc* ke kináre ko kátkar us ka itna hissa sámne ki taraf mor do kih *pliers* ki pakar men a sake. Phir puráne *disc* ko nikálkar naya *disc* lagáo. Mumkin hai kih nae *disc* ko *front cone* par lagáne ke lie áhista áhista thonkne ki zarurat pare.

(b) *Auxiliary packing gland* jorna.

Agar goli wagaira lagne se *packing gland* ko itna nuqsán pahunche kih kám na de sake to use utákar us ki jagah *auxiliary packing gland* jora ja sakta hai. Is ka tariqa yih hai:—

Outer casing muzzle attachment, muzzle cup aur bigra hua *packing gland* utár lo. Phir *combination tool* se kám lete hue *auxiliary packing gland* jorkar kas do aur *fuzee spring* ka wázan koi 3 *pound* kam kar do.

(c) *Foresight* ko dahne báen hatákar durust karna (sirf uhdadáron ke lie).

Agar *foresight* ko nuqsán pahuncha ho, ya wuh apni durust jagah se sarak gaya ho, to use phir se durust karna zaruri hai. Yih kám sirf tajribakár uhdadár hi kare aur sirf 30 gaz wále *range* par kare.

Target.—Target par khare rukh *aiming mark* ke taur par ek moti lakir ho. Is moti lakir ke *centre* ko dahne ko 5/8″ ke fásile par *pencil* ki lakir ho. Yih lakir itni bárik khichi hui ho kih *fire* karne wále ko nazar na áe.

Pahle kuchh *burst fire* karke *gun* ko us ki jagah par achchhi tarah jama lia jáe.

Phir *firing lever* aur *safety catch* ke darmiyán ek *punch* guzárkar 10 *round*on ka *group fire* kia jáe.

Agar *foresight* apni durust jagah par laga ho to ziáda golián *pencil* ki lakir par lagengi yane jis jagah ki shist li gai hai us se 5/8″ dahni taraf ko. Agar *foresight* apni durust jagah par laga na ho yane agar ziáda golián *pencil* ki lakir ke dahne ya báen ko lagti hon to jis taraf ko jis qadar hatkar lagti hon *foresight* ko, *No.* 3 *punch* aur *hammer* se thonk-kar usi taraf ko usi qadar sarka do.

Har dafa durusti karne ke bád das *round*on ka ek *burst fire* kia jáe yahán tak kih *foresight* durust jagah par a jáe. *Foresight* ko bari hoshyári ke sáth halke háth se thonk-kar zara zara karke sarkána cháhie kionkih *foresight* ki *position* men zara si tabdili karne se golián káfi dahne ya báen ko hatkar lagti hain. Agar *foresight* bahut ziáda sakht ho to *bracket* ko sahára dia jáe tákih thar-tharáhat se dhila na ho jáe. Zaruri hai kih *tripod* ka *socket* bilkul sidha khara ho. Har ek *group fire* karne ke bád bari hoshyári ke sáth shist ki durusti ki partál karna cháhie tákih agar *tripod* apni jagah se sarak gaya ho to is ka pata lag jáe.

(d) *Barrel casing* men surákh ho jána.

Agar *barrel casing* men golion wagaira se surákh ho jáe to niche likhe hue qáidon ke mutábiq *unit* hi men us ki marammat ki jáe:—

Luting ki ek chhoti si gaddi banákar surákh ya surákhon par jáma do (agar ise falálain ya kisi aur kapre men lapet dia jáe to ziáda munásib hoga, kionkih is tarah wuh dabkar surákh ya surákhon men se andar ko na ghus sakegi). Phir is gaddi ke upar tel lagi hui falálain ka tukra laga do aur falálain ki patti lapetkar bándh do. Is se surákh bilkul to nahin band honge lekin phir bhi bahut thora páni niklega aur *gun fire* kar sakegi.

(e) *Belt* ki marammat wále auzár ke istemál ki bábat hidáyaten.

Kharáb pattron aur *eyelet*on ko utár do. Agar lamba pattra lagána ho to pahle donon siron ko is tarah joro kih ek *eyelet* ále ke chaure sire men rahe. Auzár ka *punch*, *eyelet* ke us sire men dálo jo khula hua na ho, aur us ka khula hua sira auzár ke *die* par tikne do, phir donon *handle*on ko áhista áhista dabákar miláo. Ab *eyelet* ke dusre sire men, *punch* dálkar donon *handle*on ko dabáo. Pattre ko pare rukh rakho aur auzár ke *handle*on ko auzár ke *punch* ke cháron taraf golái men áge pichhe hiláo tákih *eyelet* ka sira durust shakl ka ban jáe.

Pattron ko *belt* men apni apni jagah par laga do, *eyelet* andar guzár do aur phir pahle ki tarah amal karo.

Chhote pattre bhi upar hi wále tariqe se jore játe hain. Farq sirf itna hai kih *belt* par lagáne se pahle un ko ek sire se jorne ki zarurat nahin hoti.

Is bát ka khayál rakhna cháhie kih auzár istemál karne se pahle *eyelet* jahán tak ja sake pattre ke andar daba dia jáe.

(f) Phate hue *belt* ki marammat karna.

Agar *belt* bahut phat gaya ho to phate hue hisse ko kátkar alag karo aur achchhe siron ko ápas men si do ya *rivet*on se jor do aur jor par pital ki pattri charha do. *Belt* ko aisi hoshyári se kátna cháhie kih niwár ke upar wále hisse ka marammat kia hua hissa us ke niche wále hisse ki marammat ki hui jagah ke thik upar na ane páe.

SECTION 8.—*BLANK FIRING ATTACHMENT.*

Instructor ke lie *note.*

Zaruri sámán.

Service gun aur *tripod*, *belt box* aur *belt*, *spare parts case* aur *spare parts box*.

Barrel, *Mk.* II, "*D. P. B.*" (*drill purposes, blank*).

Cone, front, muzzle attachment, blank.

Cup, muzzle attachment, blank.

Nut, adjusting, muzzle attachment, blank.

Screw, adjusting, muzzle attachment, blank.

Spanner, muzzle attachment, blank.

ATTHAISWAN SABAQ.—*Gun* ko durust karna.

1. *Barrel, breech* par khás taur se *choke* kia hua hota hai, aur is ke *trunnion block* par "*D. P. B.*" likha hota hai.

Adjusting screw, front cone men pichhe se dálkar kasa játá hai, tákih is ka bara sira *muzzle cup* men lag sake.

Front cone, adjusting screw samet *muzzle attachment* ke *outer casing* men jangi *front cone* ke bajáe jor dia játa hai.

Adjusting nut, adjusting screw ke nikle hue hisse par charhákar kas dia játa hai aur *front cone* ki satah men lagkar jam játa hai.

Spanner is tarah ka banáya gaya hai kih *muzzle cup, adjusting screw* aur *nut* par charháya ja sake.

2. *Gun* ko us waqt durust karna jab "*blank firing*" ke khás purze jure hue hon.—*Fuzee spring* alag karke *crank handle* ke *boss* par *spring balance* ka phanda charhákar wazan karna cháhie aur dekhna cháhie kih *recoil* hone wále hisson ko pichhe khenchne ke lie jis wazan ki zarurat hoti hai wuh 2 *pound* se ziáda to nahin hai.

Fuzee spring ka wazan, jab *spring balance* ke phande ko *crank handle* ke *knob* par dálkar dekha jáe to 7 aur 9 *pound* ke darmiyán hona cháhie.

Muzzle attachment ke *adjusting screw* ko pahle andar ki taraf itna kasna cháhie kih wuh *muzzle cup* ko chhune lage. Yih kám karte waqt *feed-block* ko nikál lena cháhie tákih is bát par nazar rakhi ja sake kih *recoil* hone wále hisse pichhe ko to nahin chalte. Ab *adjusting screw* ko dhái chakkar kholkar *nut* ke zarie wahin par qáim kar do. Is durusti men bahut zaruri hai kih *gun* men *fuzee spring* durusti se jora jáe. Is ke bád *adjusting screw* ki aur durusti na ki jáe aur *fire* karte waqt jis qadar durusti zaruri malum ho wuh *fuzee spring* ko thik karke ki jáe, jis tarah *service gun* ke lie ki játi hai.

Note.

(*a*) *Fire* karne ke lie sirf *service gun*on se kám lia jáe.

(*b*) Ek *belt* (aur ho sake to aisa *belt* jis ke kháne istemál hote hote kisi qadar bare ho gae hon) istemál kia jáe. *Blank ammunition* ke *round* das das *round*on ke *group* karke is tarah *belt* men lagáe jáen kih un ke pichhe hue sire *belt* ke sámne wále kináre ke barábar rahen. *Fire* karti hui *machine gun* záhir karne ke lie *round*on ki yih tadád káfi hoti hai aur *barrel* ka *choke* ziáda dinon tak kám dene ke qábil bhi rahta hai.

(*c*) Agar yih sáf záhir ho kih *gun* beqáidagi se *fire* karne lagi hai to *barrel* ko kholkar *armourer* ke muláhaze ke lie alag rakhna cháhie.

(*d*) *Barrel casing* men usi tarah páni bhar dia jáe jis tarah jangi *ammunition fire* karne ke lie bhara játa hai.

(*e*) Jab *gun* men *blank firing attachment* laga hua ho to wuh us waqt tak *gun chest* men nahin rakhi ja sakti jab tak *muzzle*

attachment ka *outer casing* apne purzon samet utár na lia jáe.

(*f*) *Blank ammunition fire* karne ke bád *gunon* par se *blank ammunition* ke khás purze fauran utár lene cháhien, tákih *gunen* phir usi hálat men a jáen, jis men sabaq shuru hone se pahle thin aur un se jángi *ammunition fire* kia ja sake.

(*g*) *Gun* ám tariqe ke mutábiq sáf ki jáe, yane usi tarah sáf ki jáe jis tarah jangi *ammunition fire* karne ke bád sáf ki játi hai. Sirf itna farq hai kih *blank ammunition fire* karne ke bád *barrel* ke andar ke hisse ko *choke* se áge sáf nahin kia játa.

SECTION 9.—ÁLE KA ISTEMÁL AUR SHIST LENE KA KÁM : ÁM BAYÁN.

1. (*i*) Zaruri hai kih tamám uhdadár aur sipáhi niche batáe hue álon se kám lene men puri tarah hoshyár hon:—

Aiming post.
Zero Post.
Direction dial.
Elevating wheel.
Clinometer.
Bar foresight.

(*ii*) Tamám *officer* aur uhdadár *Slide Rule* se kám lene men puri tarah hoshyár hon. Tamám *officeron* aur pakke uhdadáron ko niche batáe hue do álon se kám lene ki sikhlái di jáe:—

Director.

(*iii*) Upar batái hui báton ke aláwa jin *officeron* aur uhdadáron ko *director* se kám lene ki sikhlái di gai ho wuh is qábil hon kih ále ko *test* karke us ki

durusti jánch saken aur yih bhi faisala kar saken kih *clinometer* thik se *adjust* hai ya nahin.

(*iv*) Qábiliyat ka zaruri darja malum karne ke lie dekho *T.O.E.D.*

Untiswan Sabaq.—*Tangent Sight* aur *Fixed Sight*.

Zaruri sámán.—*Gun, tripod, belt box, landscape target.*

Instructor **ke lie** ***note***.

1. ***Sight*** **lagána.**

Niche batáe hue kám samjhákar namune dikháo:—

(*i*) *Direction* aur *elevation* hásil karne ke lie *sighton* ka istemál.

(*ii*) *Sight* lagáne ka durust tariqa. Sab se chhoti durusti 50 gaz ki batái jáe.

(*iii*) Yih kih *graduated plate* par kisi fásile ki durust lakir wuh lakir hoti hai jo us fásile ko záhir karne wále hindase ke niche kati hui ho.

(*iv*) *Fixed sight* 400 gaz tak ke fásilon ke lie istemál kia jáega.

Jawánon se kai ek fásilon ke lie *sight* lagwáe jáen.

2. **Shist lene ke qáide.**

Bayán karo:—

(*i*) Zaruri hai kih *sight* thik sidha khara ho. Agar *tripod* durusti se khara kia jáe to aisa yaqin ho sakta hai.

(*ii*) Ánkh *aperture* ke jitni qarib rakhi ja sake rakhi jáe.

(*iii*) *Fire* karne wála khud *aperture* ko na dekhe balkih us men se nisháne ko dekhe.

Shist lene men jo galatián ám taur par hua karti hain un ke namune dikháo (dekho *Pamphlet No.* 3, **Chhata Sabaq**).

Yih samjháo kih sikhlái men jis waqt gulzari ya *aiming post* ya batti ki shist li jáe shist lene wále ko cháhie kih gulzari ya *aiming post* ke nichle hisse ke bichon bich shist le kionkih agar *centre* yane bich wále hisse ki shist li jáe to *foresight* sáf taur par dikhái nahin dega.

3. **Shist lene ke tariqe aur sikhlái ki tartib.**

(*i*) "*Holding*" kie bagair *gun* ko *aiming post* par durusti se *lay* karo. *Lay* karte waqt thori *belt* ko háth par tikána zaruri hai. Ek *belt box* ghutnon par rakhkar us par saháre ke lie kuhnián tikái ja sakti hain ya *lay* karne wála agar cháhe to ek *belt box* ko sire ke bal khara karke us ke upar apne bázu tikáe. Bayán karo kih *direction traversing handle* on ko *tap* kar karke aur *elevating wheel* ko ghumákar hásil kia játa hai.

(*ii*) Phir har ek jawán shist ko dekhe aur bári bári *holding* kie bagair *gun lay* kare.

Agar koi galati malum ho to samjha do kih us galati ka kya asar parega. Is ke aláwa galati ki durusti karáo.

Agar kisi jawán ki shist galat ho to zaruri hai kih us ko us ki galati is tarah dikhákar samjhái jáe kih khud galati mán le.

(*iii*) Jawánon ko "*holding*" karke shist lena sikhayá jáe. Zaruri hai kih *tripod* achchhi hálat men ho, warna "*holding*" karke aur "*holding*" kie bagair jo shisten li jáengi, un men káfi farq hoga. Asl men farq nahin hona cháhie.

(*iv*) *Landscape target* ke nihsánon par aur sab se ákhir men qudrati nishánon par shist lene ka tariqa dikháo.

(*v*) Yih dikháo kih shist ke asli nishán se dahne ya báen ko shist ka dusra nishán kis tarah pahchána játa hai.

Gun ko *tap* karke kisi aise nishán ya jagah ki shist lo jo shist ke asli nishán se dahne ya báen ko ho phir jawán se kah do kih jis nishán ya jagah ki shist li gai hai us ka bayán kare.

(*vi*) Namuna dikhákar yih batáo kih *tangent slide* ko upar ya niche karke shist ka aisa nishán kis tarah chuna játa hai jo asli nisháne ke thik upar ya niche ho.

TISWAN SABAQ.—*Bar Foresight.*

Zaruri sámán.— *Bar foresight, gun, tripod,* aur *aiming post.*

Bayán karo aur namuna dikháo.

I. Bayán.

1. *Sight* faulád ka bana hota hai, aur us ke yih hisse hote hain:—

(*i*) Ek *bar* koi das *inch* lamba, jis par das das *minute* aur *degree* ke nishán (bich wáli lakir se dahne báen sát sát *degree* tak) bane hote hain.

(*ii*) Ek ulte U ki shakl ka *bracket* jis men *bar* jura hota hai aur jo aisa bana hota hai kih *gun* ke *foresight* ke *protecting wing* on men lag jáe. Is *bracket* ke báen pahlu men ek pech hota hai jo *foresight* ke báen *wing* ke surákh men lag játa hai, aur dahne pahlu men ek *spring stud* hota hai jo *foresight* ke dahne *wing* ke katáo men baith játa hai.

Bracket ki upar ki satah par das das *minute* ke waise hi nishán bane hote hain jaise *bar*

par, aur bich wáli lakir par *zero* likha hota hai.

(*iii*) *Sliding sight* jis men ek *clamp screw* laga hota hai, tákih *sliding sight* ko *bar* par jis jagah cháhen sarkákar kas saken.

Sight par ek *central blade* aur *protecting wing* lage hote hain. Yih *sight* aisa bana hota hai kih rát ke waqt *fire* karne ke lie zarurat ho to is par *night sight* lagáe ja saken.

Slide par do *pointer* lage hote hain, jin ke zarie *bar* aur *bracket* ki *degree* aur *minute* parhe játe hain.

Sight ko jorte waqt khayál rakha jáe kih pech par ziáda zor na dála jáe, kionkih is se *gun* ke *sight protecting wing*on ki shakl bigar jáegi aur *bar* tirchha ho jáega.

2. ***Bar Foresight*** **ko lagána.**

Gun mount ki hui, *number* 2 *gun* ke dahni taraf *kneeling position* men, bar *foresight* jawán ke *pouch* men aur *pouch* jawán ke báen kandhe par *sling* kia hua ho.

Number 2 *foresight* ko *pouch* men se nikále aur dekh le kih wuh *zero* par hai. Phir wuh *bar foresight* ko *gun* ke *foresight protecting wing*on ke upar rakhe aur yih itminán karke kih *spring stud* dahne bázu ke katáo men baith gaya hai, *bracket* ke *clamp screw* ko kas de.

3. ***Bar foresight*** **ke zarie** ***angle of direction lay off*** **karna.**

Gun mount ki hui, *bar foresight* laga hua aur shist ke nishán par *lay off* kia hua. *No.* 2 *gun* par.

Number 2 batáe hue *deflection* ke mutábiq *bar foresight* ko durust kare.

Yád rahe kih agar *deflection* báen ko batáya jáe to *sight* dahne ko sarkána cháhie aur dahne ko batáya jáe to báen ko. *Sight* is tarah lagáya jáe kih us men 2

minute se ziáda ki galati na ho, magar hukm dete waqt qarib se qarib ka aisa adad batáya jáe jo pánch par taqsim ho jáe.

Bar foresight ko *pouch* men rakhte waqt *zero* par laga dia jáe.

II. Jawánon se mashq karáo.

Iktiswan Sabaq.—(*a*) *Post, Aiming, M.G. Mark I*; (*b*) *Zero Post, M.G. Mark I.*

Zaruri sámán.—*Aiming post*, *gun*, *tripod*, *bar foresight*, aur *zero post*.

Bayán karo aur namuna dikháo.

I. Bayán.

A. *Post, Aiming, M.G. Mark I.*

Aiming post durbin ki si banáwat ka ek *stand* hota hai, jis ka upar ka hissa uncha nicha kia ja sakta hai.

Stand ke nichle sire par ek dháti *plate* hota hai, jis men tin mekhen lagi hoti hain. *Plate* ko páon se dabákar mekhen zamin men gári ja sakti hain. Sáth hi *plate* se yih fáida hota hai kih narm zámin men *stand* ziáda nahin dhansne páta.

Aiming post ke nichle hisse (yane nalke) ke upar wále sire par ek *clamping screw* hota hai, jis ke zarie upar wále hisse ko jis unchái par cháhen kas sakte hain.

Upar wále hisse (yane nalke men jáne wáli salákh) ke upar wále sire par ek *bracket* hota hai jis ke ek taraf ek *day aiming mark* (din ke waqt shist lene ka nishán, yane safed zamin par kála *bulls eye*) pakke taur par laga hota hai. *Bracket* ki dusri taraf *night aiming lamp* ke lie (jab yih istemál men ho) tekan ka kám deti hai. Salákh par ek *collar* aur *clamping screw* hota hai, jis se yih fáida hota hai kih agar salákh ghumái jáe to bhi ek muqarrara unchái par rahti hai.

Is tarah agar cháhen to *aiming lamp* ko usi unchái par laga sakte hain jis unchái par *day aiming mark* ho.

(*ii*) *Aiming post* ko khara karna.

Gun mount aur koi sa *quadrant angle* dekar *lay* ki jáe, *bar foresight* lagáya jáe. *Number* 1 *gun* par ho, *Number* 3 chand gaz pichhe *aiming post* lie hue khara ho. *Instructor Number* 1 ke taur par kám kar sakta hai.

Number 1, *gun* ko hiláe bagair, *tangent sight* ko sarkákar 2,500 gaz par lagáta hai. *Number* 3 *gun* ke pás játa hai aur *sighton* par se dekhkar shist ke nishán ki qarib qarib durust jagah malum karta hai. Is ke bád wuh kam se kam 5 gaz áge ko *aiming post* khara karta hai. *Number* 1 isháron ke zarie *Number* 3 se *post* ko idhar udhar hatwáta rahta hai, yahán tak kih *line of sight* shist ke nishán par 6 baje par a játi hai.

Number 3 ko cháhie kih ya to shist ke nishán ko zamin par rakh de ya *post* ko khare rukh lagáe. Agar yih na ho sake to *post* ke páe ko ek taraf se zamin men mazbuti ke sáth itna dhansa dena cháhie kih *post* ki salákh ko zarurat ke mutábiq ásáni se upar niche kia ja sake.

Is ki mashq *bar sight* ko lagákar aur bagair lage donon tarah karni cháhie.

II. Jawánon se mashq karáo.

B. *Post Zero M.G. Mark* I.

I. Bayán karo aur namuna dikháo:—

(*i*) *Post, zero, M.G., Mark* I.

Zero post lohe ka hota hai aur is ki lambái 3 *foot* hoti hai. Is ke uparle sire par 4 *inch* qutr ka ek kara sa bana hota hai aur nichla sira nokdár hota hai.

(*ii*) *Zero post* lagána.

Gun mount aur koi sa *quadrant angle* dekar *lay* kia jáe; *bar foresight* laga hua ho. *No.* 1 *gun* par ho. *No.* 3 chand gaz pichhe *zero post* lie hue khara ho. *Instructor No.* 1 ke taur par kám kar sakta hai.

No. 1 aur *No.* 3 usi tarah kám karen jis tarah *aiming post* lagáte waqt kia játa hai.

Zero post ko is tarah lagáya jáe kih *line of sight* us jagah se guzre jahán kara *post* ke dande men jura hua hai.

Agar ise sidha khara na lagáya ja sake to dahne ya báen ko jhukákar lagáya ja sakta hai. Is bát ki ihtiyát rakhni zaruri hai kih *zero post* ko mora na jáe aur use is tariqe se lagáya jáe kih *fire unit* ki kisi *gun* ka *fire* us par na par sake.

II.—Jawánon se mashq karáo.

BATTISWAN SABAQ.—*Direction Dial Mk.* I.

Instructor ke lie note.

Zaruri sámán.—*Gun* aur *tripod.*

1. Bayán karo aur namuna dikháo:—

Dial par bane hue darje (ya nishán).

Harf "R" aur "L".

Pointer.

Clamping screw.

(*i*) Bayán.

Direction dial par *Right* aur *Left* donon taraf "0" se lekar 180 *degree* tak ke nishán bane hue hain. "0" ek pech ke zarie záhir kia gaya hai. *Scale socket* ke gird ghumáya ja sakta hai aur ek *clamping screw* ke zarie kisi bhi jagah qáim kia ja sakta hai. *Crosshead* ke dahni taraf ek *pointer* laga hua hai jo *dial* ke sáth istemál kia játa hai.

(*ii*) *Dial* ko *zero* par lagána.

No. 2 *clamping screw* ko dhila karke *dial* ko us waqt tak ghumáta játa hai jab tak "0" *pointer* ke sámne nahin a játa, phir wuh *clamping screw* ko kas deta hai.

(*iii*) *Dial* ke zarie *angle of direction lay off* karna.

Gun mount ki hui ho aur *dial*, *zero* par laga hua ho. *No.* 1 *gun* par ho. *No.* 2, *traversing clamp* ko dhila karke *gun* ko dahni (ya báin) taraf itna ghumáta hai kih *pointer* hatkar harf "R" (ya "L" jaisa hukm dia gaya ho) ki taraf chale, aur jab *angle of direction* ki batái hui *degreeon* ya *minuteon* par a chuke to *traversing clamp* ko kas deta hai. Switch *minuteon* ke aise adad men batáe jáen jo das par puri bár taqsim ho sake, aur durustián 10 *minute* se ziáda ki na lagái jáen.

2. Jawán mashq karen.

TENTISWAN SABAQ.—*Elevating Wheel.*

***Instructor* ke lie *note*.**

Zaruri sámán.—*Gun* aur *tripod.*

1. Bayán karo aur namuna dikháo:—

(*i*) Bayán—*Elevating wheel* par *degreeon* ke lie chaure nishán das das *minute* záhir karne ke lie bárik nishán, aur pánch pánch *minute* záhir karne ke lie nuqte bane hote hain.

Elevating wheel ke sáth istemál karne ke lie *elevating gear* men ek *pointer* laga hota hai.

Wheel par bane hue nishánon ka matlab jawánon ko samjha dia jáe.

(*ii*) *Gun* ko *elevate* ya *depress* karna.

Gun ek shist ke nishán par *lay* ki hui ho. *No.* 1 *gun* par ho. *No.* 1 *elevating wheel* ke zarie *gun* ko zarurat ke mutábiq *depress* ya *elevate* kare aur yih kám kar chukne par shist ke nishán ke sáth phir se *sighton* ki sidh miláe.

2. Jawánon se mashq karáo.

CHAUNTISWAN SABAQ.—*Clinometer, Vickers,* ·303-*Inch M.G. Mark* I.

***Instructor* ke lie *note*.**

Zaruri sámán.—*Gun, tripod* aur *clinometer.*

1. Bayán karo aur namuna dikháo:—

i. **Bayán.**—

Is ále men *manganese bronze* ka ek thos tukra hota hai, jis ko *cradle* kahte hain. *Cradle* ki upar ki satah *arc* ki shakl ki kati hoti hai, jis men *arc* sarak-kar chala játa hai. Nichli satah men ek fauládi ka thos *base* jura hota hai, jiski banáwat aisi hoti hai kih jab pichhla *cover* utha dia játa hai to *base, gun* ke *side plateon* ke darmiyán baith játa hai.

Cradle ke ek rukh par ek *degree scale* bana hota hai, jis par *elevation* aur *depression* ke lie 0 se 20 *degree* tak ke nishán hote hain. *Degree* ek tir ke zarie jo *arc* par bana hota hai parhi játi hai. *Elevation* aur *depression* ke nishánon men kála rang bhara hota hai aur un par pánch pánch *degree* ke hindase aur har hindase ke bád E (yane *elevation*) ya D (yane *depression*) likha hota hai.

Cradle men do *bearingon* par ek *worm spindle* laga hota hai, jis ka ek sira chul par hota hai. Is se yih fáida hota hai kih jab jaldi se *set* karna ho to *worm spindle* ke dusre sire ko niche ki taraf dabákar *worm* ko *arc* se alag kar sakte hain.

Ek *spring* bhi laga hota hai jis ke zarie *worm spindle* aur *arc* ka miláp qáim rakha játa hai.

Worm spindle par do *micrometer collar* jure hote hain—ek ke zarie *minuteon* men *depression* parha játa hai aur dusre ke zarie *minuteon* men *elevation*.

Micrometer collaron par pánch pánch *minute* ke nishán aur das das *minute* ke hindase khude hote hain aur inka rang wuhi hota hai jo *degree scale* ka. In hindason ke niche *elevation* aur *depression* záhir karne ke lie harf E aur D likhe hote hain.

Worm spindle ke ek sire par ek dandánedár sira jura hota hai, jiska ek chakkar ek *degree* záhir karta hai.

Arc sarak-kar *cradle* men chala játa hai. Iski nichli satah par dánt bane hote hain, jin men *worm* phansa rahta hai. Is men do pechon par *degree scale* ke lie ek *adjustable reader* laga hota hai. Iski upar ki satah par ek *spirit-level* laga hota hai.

Base par ek tir aur lafz "*Target*" khuda hota hai. Is se záhir hota hai kih *clinometer* ko *gun* ke upar thik kis rukh par rakhna cháhie.

ii. ***Clinometer* ke zarie *gun* par *elevation* ya *depression* lagána.**

Gun qarib qarib hamwár *mount* ki jáe. *Number 2 gun* ke dahni taraf *kneeling position* men, *clinometer* apne *case* men *zero* par *set* kia hua aur báen kandhe par *sling* kia hua ho.

Number 2 clinometer ko *case* se nikálkar batáe hue *angle* par lagáta hai, aur tir ka rukh sámne ki taraf karke *clinometer* ko *gun* ke *breech casing* ke *side plate*-on par rakhta hai. *Clinometer* is tarah rakhna cháhie kih wuh na to *trigger bar lever* se lage na *trigger* ki nok se. *Elevating wheel* ghumákar *Number 2 spirit-level* ke bulbule ko bich men láta hai.

Kám khatm ho jáne par *clinometer* dobára *zero* par *set* kar dia jáe magar dusre mauqon par usko batáe hue *angle* par laga rahne dia jáe.

Hukm dete waqt jo *angle* batáya jáe wuh qarib se qarib ke itne *minute*on men batáya jáe jo pánch par taqsim ho jáen. *Angle* lagáne men do *minute* se ziáda ki galati na honi cháhie.

iii. ***Gun* ka *quadrant elevation* malum karna.**

Gun mount ki hui aur *elevation* ya *depression* ke kisi *angle* par *lay* ki hui ho. *Number 2 gun* ke dahni taraf *kneeling position* men ho aur *clinometer* ko jo

zero par *set* kia hua aur *case* men ho) báen kandhe par *sling* kie hue ho.

Number 2 clinometer ko *case* se nikálkar aur uske tir ka rukh sámne ki taraf karke *gun* ke *breech casing* ke *side plate*on par rakhta hai. Wuh dandánedár sire ko ghumáta játa hai yahán tak kih bulbula bich men a játa hai. Ab wuh *clinometer* ko hatákar *angle* parhta hai.

Clinometer ka *angle* qarib se qarib ke itne *minute*on men parha jáe jo pánch par taqsim ho jáen.

iv. **Jawánon se mashq karáo.**

Paintiswan Sabaq.—*Clinometer* ko *Test* Karna.

***Instructor* ke lie *note*.**

Zaruri sámán.—*Gun*, *tripod* aur *clinometer*.

Bayán karo aur namuna dikháo :—

I. *Clinometer* ki ázmáish karna.

(*i*) *Scale* ko *zero* par *set* karo.

(*ii*) *Clinometer* ko *gun* par rakho aur itna *elevate* ya *depress* karo kih bulbula bich men a jáe.

(*iii*) *Clinometer* ko ulatkar dekho kih bulbula kis jagah hai.

(*a*) Agar bulbula bich men ho to samjho kih *clinometer* thik hai; magar itminán karne ke lie das *degree elevation* aur das *degree depression* par bhi ázmákar dekh lo.

(*b*) Agar bulbula bich men na ho to samjho kih *clinometer* men galati hai.

(*iv*) Galati hone ki surat men *clinometer* ko *gun* hi par rakhe rakhe *minute scale* ko itna ghumáo kih bulbula phir bich men a jáe, is ke bád *scale* par *minute* parh lo.

(*v*) Yih *minute zero* se jitne ziáda hon un ka ádha kar do. Ádha karne se jitne *minute* áen, utne hi *minuteon* par *scale* ko *set* kar do, masalan agar *reader* 20 *minute* E záhir karta ho to *clinometer* ko hatákar *scale* 10 *minute* E par *set* kar do.

(*vi*) *Clinometer* ko dobára *gun* par rakhkar (*ii*) aur (*iii*) wáli kárrawái karo. Agar bulbula bich men na áe to (*iv*) aur (*v*) wáli kárrawái duhráo.

Note.—1. *Minute drum* ko ghumáte waqt ákhir men hamesha báin taraf (yane ghari ki suion ki chál ke ulte rukh) ghumáo. Agar *clinometer* men kuchh galati hogi to wuh is tarah malum ho jáegi kih jis waqt *clinometer* thik pare rukh hoga *zero* wáli *reading* men farq hoga. Is galati ko yád rakhna aur jald se jald durust karána cháhie.

2. Agar kisi *gun* ko kisi aise *clinometer* se *level* kia jáe jiski bábat malum ho kih durust hai to phir jitne bhi *clinometer* maujud hon sab ki ázmáish usi *gun* par ki ja sakti hai, aur wuh is tarah kih har *clinometer* ko *gun* par rakhkar dekha jáe kih áya koi galati hai ya nahin aur hai to kitni.

3. **Clinometer ko durust karna.**

Clinometer men jitne *minute* ki galati malum ki gai ho, usko utne hi *minute* par *set* karo, aur *spanner* se *micrometer collar* ki dhibrián khol do. Ab paimáne ko *zero* par *set* karke dhibrián kas do.

4. Agar galati ziáda ho to mumkin hai kih *degree reader* ko nae *size* se *set* karna pare. Iske lie donon pech khol do aur zarurat ke mutábiq *reader* ko dahne ya báen ko sarkákar pech kas do.

5. *Clinometer* men durustián sirf *armourer* hi se karái jáen.

II. Jawánon se mashq karáo.

Chhattiswan Sabaq.—*Director*, No. 4 Mk. II.

Instructor* ke lie *note

Zaruri sámán.—Kuchh *director*.

1. Bayán karo aur namuna dikháo:—

Telescope ko *focus* karna.

Pointer.

Director par bani hui *degreeon* ka paimána.

Clinometer level aur *elevating gear*.

Degree scale plate.

Index plate ko lagákar kasne ka tariqa aur *clamping screw* ke kám karne ka tariqa.

Stand par charhe hue *spirit-level* se kám lena, aur *base plate* men laga hua kánta.

(*i*) Bayán.—*Director* in chizon se milkar banta hai:—

Ek *telescope, vertical pointer* samet. Yih *box* ke andar lage hote hain. *Telescope, eyepiece* ke zarie *focus* kia ja sakta hai.

Clinometer level. Yih *box* men báin taraf laga hota hai. Is ke yih hisse hote hain:—Ek *bubble arm*, ek *degree scale* aur *micrometer head*. *Micrometer headon* par pánch pánch *minute* ke nishán bane hote hain. *Degree scale* ka uparla ádha hissa aur uparla *drum* yih donon *elevation* ke lie hote hain; aur *degree scale* ka nichla ádha hissa aur nichla *drum* yih donon *depression* ke lie hote hain.

Niche ki taraf ek *slider* aur *spring* laga hota hai, jin ke zarie *director* ko *director stand* men lagáte hain.

Director stand, jis ke hisse yih hote hain:—Ek gol pattar jis men ek *clamping socket*, tin qabzedár páe aur páyon ke

bich men niche ki taraf ek kánta laga hota hai. Kánte men koi wazandár chiz latkái ja sakti hai jis se *director stand* ki sidhái malum ho sake.

Clamping socket ghumáya ja sakta hai aur us men ek *clamping screw* laga hota hai jis ke zarie *base* men *clamping socket* kasa játa hai.

Degree scale plate, *clamping socket* ki uparli satah men laga hota hai. Us par dahne báen donon taraf (R aur L) 0 se 180 tak *degree*on ke nishán bane hote hain.

Is ke upar *index plate* laga hota hai, jis ke báhar ke kináre par ek tir ka nishán bana hota hai. Is *index plate* par (*a*) ek dandánedár dhibri lagi hoti hai jis ke zarie *index plate* ko *degree scale plate* men kaste hain, (*b*) ek *spirit-level* laga hota hai jis ke zarie *director stand* sidha khara lagáya játa hai, (*c*) aur ek *compass* laga hota hai.

Carrier, jis men *director slide* laga hota hai, *slow motion elevating gear* ke zarie *elevate* ya *depress* kia játa hai.

Carrier aur *slider* par jo kamánián lagi hoti hain, wuh is maqsad ke lie hoti hain kih *carrier* aur *slider* ek dusre men khub jamkar baithen aur hilne julne na páen.

(*ii*) *Director* lagána.

Director aur *director stand* ko un ke *case*on men se nikálo. Phir *director* ke pende ko *carrier* men thik thik lagáo. Páyon ko phailákar is tarah zamin par jama do kih *director* munásib unchái par rahe. Tajribe se malum hoga kih ek ghutna tek-kar baithne ki *position* sab se ziáda munásib hai, go mumkin hai kih kabhi kabhi is se niche ki *position* ikhtiyár karni pare. Páyon ko achchhi tarah zamin men dhansa do. Apna itminán

kar lo kih *degree scale plate* hamwár ya qarib qarib hamwár hai.

(*iii*) *Angle of sight* lena.

Telescope ko *focus* karo aur *clamping screw* ka pech dhila karke *elevating gear* aur *clamping socket* ke dandánedár hisse se kám lete hue *pointer* ki nok ko nishán par *lay* karo.

Ab us *milled head* se kám lete hue jo *depression micrometer head* ke niche hai, bulbule ko thik bich men le áo, aur *degree scale* aur *micrometer head*on se kám lekar *angle of sight* parho. Jab bulbula ek dafa thik bich men láya ja chuke to phir *angle of sight* kisi bhi munásib waqt par parha ja sakta hai. *Angle of sight* ke *minute* sab se qarib ke sahih adad men parhe jáen. Jab kám khatm ho chuke to tir ke nishán "*zero*" par laga die jáen.

(*iv*) Do nishánon ke darmiyán ka bagli *angle* nápna.

Index plate ke *pointer* ko *degree scale* ke "*zero*" wále nishán ke sámne lagáo. *Clamping screw* kas do. Phir *elevating gear* aur *clamping socket* ke dandánedár hisse se kám lete hue *pointer* ko donon nishánon men se pahle nishán ki sidh men lagáo aur *clamping screw* kas do.

Ab *clamping nut* dhila karke *pointer* ko dusre nishán par laga do.

Ab *degree scale* par dahne ya báen ko (yane R ya L ki taraf) *degree* aur *minute* parho (*minute* sab se qarib ki dahái men parhe jáen). Is bát ka bara khayál rahe kih jis waqt *index plate* ko sarkáya jáe *degree scale plate* apni jagah se khisakne na páe. Jab kabhi *index plate* ko sarkána ho to *director* ko nahin balkih *carrier bracket* ko pakarkar sarkáo.

Director stand ko us ke *case* men dálne se pahle us ke *slide* ko pare rukh kar lo, *compass* ko us ki jagah par kas do aur *index plate* ke *pointer* ko 180 *degree* ke nishán par lagáo.

2. Jawánon se mashq karáo.

Saintiswan Sabaq.—*Angle of Sight* ke lie *Director* ko *Test* Karna.

Instructor ke lie note.

Zaruri sámán.—*Director.*

I. *Angle of sight* ke lie *director* ko *test* karna.

Yih is tarah kia jáe:—

(*i*) Koi aisi *position* chun lo jahán do aisi diwáren ya sidhe khambe hon jo ek dusre se koi 200 gaz ke fásile par hon aur jahán tak ho sake donon pare rukh ki ek hi satah par hon.

Ab *director* ko ek diwár par kisi jagah lagáo, agar ho sake to wuh jagah kisi makán ka kona ho. Agar *director No.* 4, *Mark* II ko *test* karna ho to *degree scale* aur *minute scale* ko *zero* par lagáo. (Bád ke bane hue *director* ko *test* karne ke lie aisa karne ki zarurat nahin hoti). Ab ále ko dusri (yane dur ki) diwár par *lay* karo aur *elevating gear* ke zarie bulbule ko thik bich men láo.

Ab *telescope* men se dekhte hue kisi jawán ko dusri diwár par wuh jagah batáo jis par *director lay* kia gaya hai aur jawán se kaho kih us jagah nishán laga de. Is nishán ka nám (B) hoga. Pahli diwár jis ke pás tum khare ho us par bhi nishán lagáo; is nishán ki unchái *director* ke *object glass* ki unchái jitni ho. Is nishán ka nám (A) rakho.

(*iii*) Ále ko dur wáli diwár ke pás le jáo aur *object glass* ko us diwár par bane hue nishán (B) par lagáo. Agar *director No.* 4, *Mark* II namune ka ho to *degree scale* ko *zero* par laga rahne do. Ab *elevating gear* ke zarie bulbule ko thik bich men láo.

Ab agar ála nishán (A) par *lay* kia hua ho to samajh lo kih ála durust hai.

(*iv*) Agar ek se ziáda ále *test* karne hon to koi thik pari lakir hásil karne ki zarurat hogi.

Agar ála nishán (A) par *lay* kia hua ho, jaisa kih upar (*iii*) men bayán kia ja chuka hai, to (A) aur (B) ko miláne wáli farzi lakir thik pari lakir hogi aur us ke zarie aur ále bhi *test* kie ja sakenge.

Agar ála nishán (A) par *lay* hua na ho aur bulbula bich men ho, to kisi ádmi se pahli diwár par us jagah jahán ála *lay* ho raha hai nishán (C) lagwáo.

Ab pahli diwár par (A) aur (C) ke thik bich men ek tisra nishán (D) lagáo. Nishán (D) ko nishán (B) se miláne se ek thik pari lakir ban jáegi.

Is ko durust sábit karne ke lie ále ko nishán (D) par rakho aur phir nishán (B) par *lay* karke durusti ki jánch karo.

Jab pari lakir hásil ho jáe, to báqi ále uske zarie *test* aur durust kie ja sakte hain.

(*v*) Pari lakir hásil ho jáne ke bád ále ko *test* karna shuru karo.

Agar *No.* 4 *Mark* II namune ka *director test* karna ho to *degree scale* aur *minute scale* ko *zero* par laga lo. (Bád ke bane hue *directoron* ko *test* karne ke lie aisa karne ki zarurat nahin hoti).

Object glass ko pari lakir ke kisi ek sire par lagáo aur *elevating gear* ke zarie *director* ko pari lakir ke dusre sire ke nishán par *lay* karo. Ab bulbula thik bich men hona cháhie. Agar thik bich men na ho to *micrometer head* ko us waqt tak ghumáo jab tak bulbula thik bich men na a jáe. Phir dekho kih kitni galati hai.

Agar aise namunon ke *directoron* ko *test* karna ho jo *No.* 4 *Mark* II ke bád bane hon, to yih zaruri hoga kih unhen sámne ke nishán par *lay* kia jáe aur yih dekh lia jáe kih bulbula thik bich men hai ya nahin. Agar bulbula thik bich men na ho to *telescope* ko us waqt tak

elevate ya *depress* karte raho jab tak bulbula thik bich men a jáe. Phir *telescope* ke *eyepiece* men se dekho kih kitni galati hai.

Note.—Agar *director* ke durust karne ki zarurat ho to yih kám *armourer* hi kare.

II. Jawánon se mashq karáo.

ARTISWAN SABAQ.—*Rule, Slide, M.G. Mark I.*

***Instructor* ke lie *note*.**

Zaruri sámán.—Kuchh *slide rule* aur *blackboard.*

Bayán karo aur namuna dikháo:—

1. *Rule, slide, M.G. Mark* I.

Slide rule par yih *scale* (paimáne) wagaira bane hote hain:—

(*a*) *Safety angle scale.*
(*b*) *Degree scale—Graticule cord.*
(*c*) *V.I. scale* aur *H.E. scale.*
(*d*) *Wind scale.*
(*e*) *Barometer scale* aur *temperature scale.*
(*f*) 1/20,000 *scale,* gaz záhir karne ke lie.
(*g*) Ek *inch* fi *mile* wála *scale,* gaz záhir karne ke lie.
(*h*) *Degree scale*—yih fauji *protractor* ke *scale* jaisa hota hai.
(*i*) *Range table.*

(*a*) *Safety angle scale.—Rule* par ek *Range to target scale* (*target* tak ke fásile ka paimána) bana hota hai, jis par 600 se 2800 tak sau sau gaz ke nishán bane hote hain. Is *scale* ke sámne *slide* par *Range to troops scale* (apni faujon tak ke fásile ka *scale*) bana hota hai, jis par 600 se 2000 gaz tak ke kále nishán aur 500 se 100 gaz tak ke lál nishán bane hote hain.

Safety angle scale se muqarrar hidáyaton ke mutábiq kám lia játa hai. Is se kám lene ke lie *slide rule* ki choti par ek 24 *inch* lambi rassi bándhi hoti hai.

Ihtiyát rakhi jáe kih is rassi men giráh na pare aur is ki lambái thik 24 *inch* rahe.

(*b*) *Degree scale—graticule cord.—Slide* par uski choti se pare ek *degree scale* bana hota hai. Is ke aláwa *slide* par ek tir bana hota hai, jo *graticule* záhir karne ke lie us rassi ke sáth istemál ho sakta hai jo *slide rule* men lagi hoti hai.

(*c*) *V.I. scale* aur *H.E. scale.—V.I. scale* par 300 se 10 tak das das gaz ke nishán bane hote hain. Is *scale* ke sáth ek *H.E. scale* bhi hota hai, jis par 3,000 se 100 tak sau sau gaz ke nishán bane hote hain. Iske aláwa ek *degree scale* hota hai jis par *zero degree* se das *degree* tak ke nishán bane hote hain.

Slide par ek tir bana hota hai, jis ke zarie *V.I.* aur *H.E. scaleon* ki madad se *angle* parhe ja sakte hain.

(*d*) *Wind scale.—Slide* ke ulti taraf 20 *mile* fi ghanta chalne wáli hawa ka haq rakhne ke lie nishán bane hote hain. Ek taraf dahne ya báen ko chalne wáli hawa ka haq dia hua hota ha, jis ke lie 115 *minute* se 10 *minute* tak ke nishán bane hote hain; aur dusri taraf áge ya pichhe ko chalne wáli hawa ka haq dia hua hota hai, jiske lie 90 *minute* se 5 *minute* tak ke nishán bane hote hain.

Slide rule ki pusht par upar ki taraf jo kata hua hissa hota hai uske bich men hawa ke lie ek *pointer* hota hai.

(*e*) *Barometer scale* aur *temperature scale.—Slide* ke ulti taraf 1 *inch barometer* ka haq záhir karne ke lie 5 *minute* se 25 *minute* tak ke nishán bane hote hain.

20 *degree temperature* (harárat) ka haq záhir karne ke lie 5 *minute* se 35 *minute* tak ke nishán bhi bane hote hain.

Rule ki pusht par niche ki taraf jo kata hua hissa hota hai uske bich men ek *pointer* hota hai.

(*f*) 1/20,000 *scale*.—Is *scale* par pachás pachás gaz ke nishán bane hote hain. Sau, pánch sau aur hazár gaz wále nishán bare hote hain. Hazár gaz wále nishánon par pure hindase likhe hote hain.

(*g*) Ek *inch* fi *mile* wála *scale*.—Is *scale* par sau sau gaz ke nishán bane hote hain. Bare nishán hazár hazár gaz záhir karte hain.

(*h*) *Degree scale—protractor*.—Dhalwán kináre ke bich men ek *protractor degree scale* hota hai, jis par *zero degree* se 90 *degree* tak ke nishán bane hote hain. Is *scale* ko *rule* ke dusre dhalwán kináre ke *zero* ke sáth milákar istemál karte hain.

(*i*) *Range table*.—*Slide* ki pusht par niche batái hui báten likhi hoti hain jo *Range table*on men se naql ki játi hain:—

*Tangent angle, angle of descent, beaten zone*on aur *cone*on ki lambái, *cone* ki bich ki jagah se sab se niche girne wáli goli ka fásila.

2. Jawánon se mashq karáo.

UNTALISWAN SABAQ.—*Night Sight*.

Instructor ke lie note.

Zaruri sámán.—*Gun, tripod, night sight,* kuchh mekhen aur *torch*.

Bayán karo aur namuna dikháo:—

I. *Night sight, Vickers* ·303-*inch M.G.*

(*i*) *Foresight* fauládi chádar ka chaukor *plate* hota hai. Yih *plate* ek fauládi *body* par khare rukh laga hota hai, jis men *spring arm* hote hain. In *spring arm*on ke zarie *foresight* ko *deflection bar foresight* ke *sliding sight* ke *protecting wing*on ke sáth jorte hain. Agar zarurat ho to *foresight* ko *gun* ke *foresight bracket* ke sáth bhi jor sakte hain.

Foresight ko *deflection bar foresight* ke sáth jorne ka tariqa yih hai kih *spring arm*on ki madad se uske us pahlu ko *protecting wing*on par laga den jo *gun* ke *breech* ki taraf ho.

(*ii*) *Backsight* khare rukh laga hua ek chaukor fauládi *plate* hota hai.

Plate ek chhote se fauládi tukre ke sáth jura hota hai, jis men ek *spring clip* laga hota hai. Yih *clip*, *gun* ke *tangent sight slide* men lag játa hai.

Backsight ko *tangent sight slide* ke sáth jorne ka tariqa yih hai kih usko báin taraf se dabákar nikle hue *blade* par rakha jáe. Aisa karte waqt is bát ka khayál rahe kih fauládi tukre ka pare rukh wála kinára *blade* ke upar wále kináre par pare: aur *spring* ke dahni taraf ka mura hua sira *slide* ke andar wále kináre men lag jáe.

II. (*a*) *Instructor*, *night sight* se kám lete hue *direction peg* par thik shist lene ka namuna dikháe.

(*b*) Jawánon se mashq karáo.

(*c*) Jawánon se andhere men shist lene ki mashq karáo.

Mashq karáte waqt *instructor torch* se *direction peg* par raushni dále.